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NOTES ON PENETRATING GUNSHOT WOUNDS OF THE CHEST.

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With the old classes of projectiles, the mortality from penetrating wounds of the chest amounted to something like 62% (Lagarde). Among the English troops in the Crimea it was 80%, and amongst the French it reached 90%. In more recent times, and with high velocity projectiles, the death-rate has declined considerably. For example, in the Spanish-American War (283 cases) the mortality was 27%, in the Boer War (214 cases) it was 14%, in the Russo-Japanese War (945 cases) it was 3.6%. In dealing with the prognosis of cases with wounds of the chest in the Boer War, Colonel Sir G. Makins states that they furnished the most hopeful class of the whole series of trunk or visceral injuries.

In regard to our experience at the Australian Hospital with this class of case in the present war, it may be stated that the unit started work at St. Nazaire, France, on September 6, 1914, and, between that date and February 28, 1915, the total number of admissions to hospital have been 2,605, and, amongst these, there have been 48 cases of penetrating wounds of the chest. One of these patients died in England some days after his arrival there, in September, 1914, and one other died in our hospital less than one hour after his admission. Including these two deaths, we have a mortality rate of 4% amongst the 48 cases admitted into the Australian Hospital. This figure approximates very closely to that in the Russo-Japanese War.

Analysing these 48 cases, it is found that 39 resulted from rifle bullets, and 9 from fragments of shrapnel. In seven cases there was fracture of rib. In 21 cases the missile entered the right side of the chest, and in 27 cases the left side of the chest was involved. In 11 cases there was lodgement of the missile in the lung tissue. In 11 cases there was hæmothorax, as proved by puncture, and in 9 of these cases the hæmothorax ultimately became purulent, and necessitated opening and resection of rib. In 3 cases there was pneumothorax associated with hæmothorax.

Symptoms.

One or more of the symptoms and signs resulting from wounds of the chest were present, *i.e.*, pain, dyspnœa, hæmoptysis, hæmothorax, pneumothorax, and hæmo-pneumothorax. Surgical emphysema of the chest wall was present in three cases.

In the cases of simple perforating rifle bullet wounds, with entrance and exit, slight dyspnœa and some initial hæmoptysis were the only symptoms.

The following represent three different types of case:—

(*a*) Male, 23, admitted December 28, 1914, wounded three days previously; perforating rifle bullet wound, entrance at the level of the left ninth rib. just behind the axillary line; exit at the level of the first lumbar spine. There was a moderate effusion into the left pleural sac (hæmothorax). Observations were made in this case to ascertain at what point (if at all) the hæmothorax became purulent. Specimens of the effusion into the pleural sac were taken at intervals, as stated below. It will be seen that the cell contents of the pleural effusion showed considerable increase in the polymorphonuclear leucocyte elements, and approximated very closely in number to the same cells in the systemic blood. No pus, however, formed in the pleural sac, and the patient was discharged with normal temperature 26 days after admission.

January 1, 1915.—Puncture fluid, left pleural sac: markedly blood-stained, sterile; white cells content 8,400 per c.mm. Systemic blood: white cell content 9,400 per c.mm.

January 4, 1915.—Puncture fluid: white cells 13,000 per c.mm.; polymorphs 90%; no pus; no bacteria. Systemic blood: white cells, 12,800 per c.mm

January 13, 1915.—Puncture fluid: white cells, 28,000 per c.mm. Systemic blood: white cells, 27,000 per c.mm.

January 15, 1915.—Puncture fluid: white cells, 26,000 per c.mm. Systemic blood: white cells, 25,600 per c.mm. The leucocytes in the puncture fluid were found to be breaking down at this date.

As already stated, the patient was discharged on 26.1.15, with a normal temperature and in good condition.

(*b*) Male, 24, shrapnel wound of the chest, with lodgement of the missile; hæmothorax, empyema. Admitted December 22, 1914, wounded two days previously. Piece of shell entered at a point one inch inside the lower angle of the left scapula. No exit wound was present. A radiogram revealed an irregular piece of shell, about three inches below the entrance wound, at the level with eleventh rib.

December 26, 1914.—The patient was aspirated through the seventh interspace, and dark, blood-stained fluid was withdrawn. No bacteria were seen in the films, and the culture was negative. A second aspiration was carried out near the site of the foreign body; clear, sterile serum, evidently derived from a shut-off sac of pleura, was obtained.

December 28, 1914.—Aspiration was performed, and deeply blood-stained fluid was withdrawn. The fluid was sterile. A rib was resected and dark, blood-stained, somewhat grumous fluid let out, but no foreign body found.

December 29, 1914.—The discharge was purulent-looking. Staphylococci were found within the cells, and free in the discharge.

January 28, 1915.—The patient was discharged to England (in hospital for 37 days).

(*c*) Rifle bullet wound penetrating the right side of the chest. Male, æt. 30. Admitted November 9, 1914. A tunnelled wound, with point of exit and

re-entry in its course. The original entry was situated in the right mid-axillary line, at the level of the ninth rib. The rib was fractured. The final exit wound was close to the point of the right shoulder. There was hæmothorax on the right side. The original point of entry of the bullet was scabbed over at the time of admission. The open axillary wound remained clean for two days.

November 11, 1914.—The blood began to ooze from the axillary wound, issuing from a torn intercostal artery.

November 12, 1914.—There were still signs of pleural effusion at the right base. An exploration revealed slimy muco-pus in aspiration needle. Operation: The original wound of entry, which had closed up, was enlarged, parts of the fractured rib were removed, and a tube was inserted. This wound was sub-diaphragmatic; some slimy muco-pus was present.

November 13, 1914.—The temperature still kept up, and the dulness persisted. A further operation, consisting of the resection of the eighth rib, was undertaken. An opening was made into the pleural sac. There was no free fluid, but on the roof of the diaphragm, and over the parietal and visceral pleuræ there was a more or less adherent layer of slimy muco-pus, which could only be removed by scraping. *Bacillus aerogenes capsulatus* was found in the muco-pus. A few days later "laudable" pus began to form, and improvement set in.

January 6, 1915.—The patient was discharged to England, wounds being practically healed. He had been in hospital for 53 days.

(*d*) Male, 23. Admitted October 31, 1914, wounded two days previously by a rifle bullet. On admission, he was very distressed, and his colour was bad. The temperature was 100°, the pulse-rate 130, and the respiration-rate 36. The bullet had passed from left to right, behind the sternum, at the level of the second rib. A purulent discharge from exit wound was present.

November 4, 1914.—The right half of the chest was aspirated, and six ounces of bloody fluid withdrawn. The patient was much easier after this. Pneumonia, involving the base of the right lung, was diagnosed. A very tympanitic percussion note was made out over right apex, and towards anterior mediastinum.

November 11, 1914.—A tender swelling developed over the sternum, at the level of the second rib, but there was no redness.

November 14, 1914.—A foreign body in track of bullet was discovered by means of X-rays. He began to get anginal attacks, lasting several minutes.

November 28, 1914.—The swelling gradually increased in size, but no softening was detected. No signs of aneurysm were present. The anginal attacks became more frequent. Several lateral radiograms were taken; four foreign bodies were seen in the anterior mediastinum (attracted by the magnet); three to the right of the mid-sternum line, and one to the left.

November 29, 1914.—One large, curved piece of trouser brace fitting was removed. The other three foreign bodies were left *in situ*.

December 2, 1914.—The patient was improving.

December 31, 1914.—He was discharged to England, his wounds being healed.

(*e*) Male, 22. Shrapnel wound just inside the apex of the left shoulder joint. Admitted October 31, 1914; hæmoptysis. Numerous pieces of metal, fragments of shrapnel and parts of shoulder badge, were seen on the radiogram, about the outer third of the clavicle, the coracoid process of the scapula, and the head of the humerus. Under chloroform anæsthesia pieces of badge and shrapnel were removed, and a counter opening made for drainage. Several pieces of shrapnel could not be located.

December 10, 1914.—The patient left for England, with the sinus still discharging. He had been in hospital for 41 days.

The X-ray photographs showing the foreign bodies present in cases (*d*) and (*e*) are attached. These were taken by Captain Herschel Harris, R.A.M.C., Radiologist with the Australian Hospital.

The absence of tetanus, following perforating wounds of the chest, is rather remarkable, and the same may be said as regards the infection of these wounds with other anærobic bacteria. One of the cases abovementioned showed infection with the *B. aerogenes capsulatus*, but when one considers the frequency of infection of wounds of the extremities with anærobic bacteria, the relative absence of such conditions in the case of perforating chest wounds is noticeable.

Treatment.

In the majority of cases, no active treatment was necessary. The patients were kept recumbent, or propped up in bed, according to the amount of distress, and the wounds were dressed antiseptically. Expectant treatment was relied on exclusively.

In those cases in which there was great and increasing distress in breathing, and the physical signs pointed to increase of the fluid in the pleural cavity, aspiration was practised; and in several cases this was repeated every day, or every second day, for several days.

In three cases, owing to the extreme distress in breathing and the large accumulation of bloody fluid in the pleural sac, together with escaped air, the chest was opened and a piece of rib excised. This led to instantaneous improvement in the condition of these patients. As already mentioned, in nine cases thoracotomy was performed.

The duration of stay of patients in hospital varied very much. Many patients were detained for a few days only. Those in whom empyema developed were kept in hospital as long as 53 days, before they were fit to be removed to England.

The necessity of absolute rest in bed in the treatment of penetrating wounds of the chest has been insisted upon by all writers on the subject. We have had a couple of cases where patients with severe chest wounds have been making very good progress, and felt so well that they got up, contrary to orders, and made trips to the lavatories, a few yards distant from their beds; this extra exertion led to a severe recrudescence of their symptoms (increase of fluid in chest, etc.).

When the unit was at St. Nazaire, evacuation of

the wounded from hospital was often very rapid, and in two of the cases of chest wound rather severe attacks of hæmoptysis occurred during the voyage from St. Nazaire to Southampton. The patients, however, made good recoveries.

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AMŒBIC DYSENTERY AND ABSCESS OF LIVER: AN INDIGENOUS NEW SOUTH WALES CASE.

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The following notes refer to a case admitted to the Sydney Hospital in October, 1914.

T.C., male, æt. 31, horse trainer, complained of severe pain in the right side of his abdomen of four months' duration, with swelling. He had lived in Maitland, New South Wales, all his life, and had never been out of the State. On entering the hospital, he stated that his only previous illness had been measles, when he was 18 years of age.

On admission, he was found to be emaciated, and his complexion muddy. He was propped up in bed, and could only lie on his right side. He appeared to be in constant pain. The temperature was 101°, the pulse-rate 116, and the respiration 24. He was sweating a good deal.

The present illness began four months before. He had noticed that he used to get a "stitch" in the right side when riding, if he went out of a walk. The pain became more constant, was dull and aching, with occasional sharp, shooting attacks, which doubled him up. He lost three stones in weight during the previous four months. His friends told him that he "looked like a Chinaman." A doctor (whose name was not recorded) at Maitland noticed swelling a week before, and the patient then came to Sydney. He said that he had had no appetite for months, and that there had been no vomiting. His bowels had been regular, but the fæces were clay-coloured for five weeks. His tongue was moist but slightly coated, and his gums were septic. The abdomen was swollen, and did not move on respiration. The swelling was more marked on the right side, from the costal margin to the iliac crest. It was very tender, especially over the liver area. The muscles were tense; rigidity was more marked over the upper part of the right rectus. There was some distension. A firm, elastic mass was felt below the right costal margin, but was not definable on account of the rigidity. Percussion showed the liver dulness extending inferiorly to a point midway between the costal margin and the umbilicus.

The respiratory and circulatory systems were clear. Urine 1020, no albumin, no sugar.

Provisional Diagnosis.—Suppuration in liver, probably due to hydatid.

Operation.—October 26, 1914. An incision one inch long was made through the right rectus, and deepened till the liver was reached. Peritoneal adhesions were present. The liver was incised and pus welled up; it was like anchovy sauce in colour. The cavity was very large, and an enormous amount of pus escaped; its quantity could not be measured. The sides of the wound were stitched; a drainage tube was inserted and dressings applied. The pus, examined a few days later, showed amœbæ to be present. The fæces also contained amœbæ. During the ten days from November 5 to November 15 he was given ten injections of ⅙ gr. emetine, but without any apparent effect on the amœbæ, which were present, both in pus and fæces, all the time. I recognize that the dosage was quite inadequate. Injections of ⅓ gr. three times a day would very likely have produced much more effective results.

When the operation had revealed the nature of the case, the patient was further questioned as to his history. It then appeared that, though for the twelve months immediately preceding his admission, he could remember no bowel trouble, he had had severe diarrhœa off and on for a period of about a year before this.

The surgical history of the case after operation was uneventful, and need not be detailed here. He went home on November 30, at his own request, the cavity being then quite small and the discharge slight.

Speaking from memory only, I can recall some five cases of liver abscess of this type, on which I have operated in the past few years, and another, not operated on, affecting a patient, who was moribund when seen. The rest all recovered. In one, the diagnosis of amœbic origin was based on the absence of increased leucocytosis, and confirmed after operation. Of another, it must be said that no amœbæ could be discovered in the discharge from the abscess at any time, though the pus was of the typical "anchovy sauce" variety. Another was quite small, hardly as large as an egg, and situated at the top of the liver, enclosed in extremely firm, dense, and resistant walls. This was reached by a transpleural route, after resection of a portion of rib. There were pleural adhesions at the base of the lung. That it was successfully discovered and reached is remarkable testimony to the value of a radiographic examination in some of these cases. In one of my cases the history revealed no more than a short and apparently insignificant attack of diarrhœa as an antecedent.

The chief interest of the case here recorded is epidemiological rather than clinical. The epidemiological importance is derived from the statement in the history that the man had never been out of New South Wales. The statement that he had lived all his life in Maitland need not mean that he had never visited other districts. The presumption is, however, that the disease was acquired at Maitland.

This is not the only case of amœbic dysentery reported to have arisen in New South Wales. At the Fifth Session of the Intercolonial Medical Congress of Australasia, Brisbane, 1899, Dr. J. L. T. Isbister recorded a series of four personally-observed cases. The report can be studied at length in Vol. I., p. 82, of the Transactions of the Congress. All four patients came from the neighbourhood of Wollongong, the port of a coal-mining and dairying district on the coast, about 40 miles south of Sydney. Two of them were next door neighbours, living a few yards apart, and obtaining their water supply from the

same tank. This was at a little mining village called Balgownie, and both men worked in the same pit, at Balgownie Colliery. Their wives and children were unaffected. Three of the four patients suffered from hepatic abscess, and these three all died. Dr. Isbister also discovered that three years previously a man from Balgownie was operated on in the Sydney Hospital for large, solitary abscess of the right lobe of the liver, by the late Dr. Goode. The pus was not examined, but it did not appear to be a case of hydatid disease. A probable sixth case was communicated to Dr. Isbister by Dr. T. F. Wade, then practising at Wollongong. Dr. Wade had opened an abscess in the lower part of the thorax, which was found to be in communication with a cavity in the upper part of the right lobe of the liver. Dr. Wade seems to have known of other cases.

A few years ago, I myself had a case of amœbic dysentery originating in the city of Sydney, in a man who had always previously enjoyed robust health. Though once a seaman, he had for several years worked as a wharf-labourer in the port. This fact takes away a great deal from the importance of the case, for it seems to me that a wharf-labourer might expose himself to a ship-borne infection.

There is one interesting point in connexion with every case hitherto recorded in New South Wales, and that is in the circumstance that every patient has been of the male sex.

One may also raise a point for study in the question whether mines may not become so infected as to become endemic centres for this disease, just as they may for ankylostoma.

I have purposely confined my remarks to New South Wales cases, though I am aware that the disease has been recorded in other States. I think it very probable that there have been many privately observed cases of amœbic dysentery and amœbic liver abscess in New South Wales and other parts of Australia which have not been recorded in the medical journals. It would be extremely interesting to hear more of the experience of the profession as to the incidence of this disease in the various States.

SOME VIEWS OF MODERN GYNÆCOLOGY.[1]

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Modern gynæcology implies study of the reproductive organs, plus the woman herself. This being represents the all-important factor. In her exists sexual instinct, the basic origin of sexual attraction and love, the causation of sexual appetite, the inherent, hence perfectly natural, desire for continuance of the race, perpetuation of her species, production of an ensuing generation.

Sexual appetite—nerve incitemen purposely implying spermatozoon introduction and physiological reception for production of her ideal, a living child—is just as normal as her innate want for air, for drink, for food, equally demands satisfaction and gratification. Denial invariably causes distress. This perfectly natural sexual instinct constitutes an unreasoning impulse, automatically guiding her towards propagation.

It represents her unconscious selection of the fittest qualities she desires added to her own in her progeny—the next generation. Natural laws of evolution will contribute from the male, her lover, qualities most attractive to, and, hence presumably, deficient in herself.

Hence follows continuance of the race, levelling, balance, in short, normal evolution, survival of the fittest and best, and certain elevation towards higher development.

Natural maternal instinct long precedes sexual appetite, yet bears a direct ratio towards it, and becomes early exemplified by love and care for dolls—symbols of the next generation—which must be dressed, nursed, educated and controlled, quite irrespective of form, figure or composition.

Fruition—woman's highest physical purpose—typifies the resultant of this instinct.

Possessing the combined elements of her parents, this being sways under the powerful, constant influences of environment, all important in her evolution and development, yet under normal mentality maternal instinct largely dominates her whole life from infancy onwards.

Gynæcologists must ever remember this important fact.

Evolution led mankind through from earliest, primitive marriage, polyandry and destruction of daughters, polygamy and concubinage, monogamy and concubinage, to our present highly civilized state of monogamy and monandry, the accepted standard of morality of the age.

Monogamy stands universal law, to-day, in every advanced nation. It represents our ideal moral standard, yet is unjust to a large proportion of womankind.

Among native races, every woman exercises her sexual powers, gratifies her sexual appetite in obedience to maternal instinct. This is natural for woman. Deviations therefrom are unnatural, and represent the penalties inflicted upon the sex by civilization.

Two classes of patients thus present themselves; the one penalized by compulsory inactivity, the other by sexual action, with all its attendant dangers and ills.

Marriage premises complete sexual unity, healthy and happy in perpetuation of the race; woman stands ever willing, ever anxious, to fulfil her obligation to maternity, since, assuredly, her life will never be complete without it.

Civilization has established man's instincts, in many cases, paramount, added to matrimonial expenses, hence, to his toil, delayed marriage and prostitution is rampant.

Increased capacity and opportunity for pleasure increases the bachelor's egoism, sexual instinct and zeal for gratification, the penal sequela, gonorrhœa being, not infrequently, conveyed to a wife chosen, and wedded during a "gleety" period. The pen-

[1] Read at a meeting of the New South Wales Branch of the British Medical Association, on April 30, 1915.

alties may be acute infection, the resultants, not improbably, sterility, from sealed tubes or surgical ablation for the relief of suffering.

Under marriage, avoidance of pregnancy, limitation of family, fœtal destruction, are still rampant. Thus, since man bears the load of increasing toil and anxiety, woman suffers penalties incidental to prevention of conception and to abortion, and the penalties are colossal.

Monogamy, avoided or deferred marriage, aided by increased prosperity and spending-power among unmarried females, induces competitive attraction for available men, hence varied and inordinate dress, or leads to independance of spirit, engagement in daily office work, lessening interest and care for children, leads to masturbation or promiscuous intercourse, the end points not infrequently, showing up in mental or bodily wreckage.

Apart from aberrant physical development and function, the above form the basis of our gynæcological work.

It is our special duty to unravel the peculiarities of each case to its very foundation, and to treat the individual, as well as the lesions, upon sound principles of therapeutics.

The social aspects of our practice are of incalculable importance. As authoritative experts we owe a great duty to humanity, especially to womankind, in this young, prosperous, health-giving country. Acceptance of our opinions and obedience to our advice will surely lessen the sum of human suffering, surely raise the standard of life and happiness, surely elevate the race and aid in placing and maintaining our country in the forefront of nations.

We should esteem and exercise this privilege. Let our guiding principle be prevention of suffering and ill-health, let our procedure be balanced by righteous conservatism and our surgical knowledge and skill, thus guided, reach their full limit when developed disease imperatively demands their application.

Our climatic conditions premise early development, maternity and precocity. We should urge earlier marriage, since, by normally balancing maternal instinct and sexual appetite by equally natural, righteous gratification, we shall establish, beyond doubt, the surest, most wholesome preventative of masturbation, illicit intercourse, gonorrhœal and syphilitic infection and their sequelæ, mental obliquity and physical disorder. We shall thus establish the surest protection for women against all those wretched infective processes which form undeviating accompaniments of unnatural, illegal interferences with pregnancy.

Marriage, the constant guardian of morality in private and public life, exercises benign influence, since woman's life enjoys natural sway and fulfils its highest purpose, and man's is stimulated and elevated by added responsibility and aided control.

Education, culture, refinement will ultimately sway the tide against abortionists and such malefactors, will establish more stringent control and inflict deterrent punishment for their crimes.

Men contemplating matrimony require advice concerning all potential risks of latent gonorrhœa and gleet, concerning all the protean manifestations of hereditary or communicated syphilis.

They should be advised especially concerning their end-points, sterility from sealed tubes, unending suffering for their wives from internal wreckage of delicate organs, dyspareunia, abortions, and the resultants of syphilitic infection in their children. Every child in one family in this city was thus penalized; one died early, one became insane, and three are still blind from congenital syphilis. The mother suffered innumerable abortions.

Moreover, men should be advised upon resultant female wreckage from criminal abortion and its almost certainly accompanying virulent infection. Women, too, should be early instructed upon the attendant risks and certain dangerous consequences. Many women do not want children until married a few years. Normal pregnancy is disturbed by attempted abortion. Destruction of organs follows, constant suffering results and causes dyspareunia, ending in domestic infelicity and unfaithfulness of the male, or sterility, with its eternal disappointment to maternal instinct.

A more enlightened state of civilization will avoid, check, control such wreckages of early adult life. The State should aid in every detail of the work, yet one seeks in vain for real, genuine attempt by Departments of Public Health even to educate the people upon the risks so vital to themselves, but which, in their ignorance, they fail to see. Most criminals pay penalty for their crimes, yet the abortionist in this country, and elsewhere, openly defies the law, hurls unborn infant life into eternity, wrecks womankind and domestic bliss, and commands enormous fees for his misdeeds.

The greatest asset of a State is its motherhood, yet the permissible wreckage in this country is colossal. Until the State awakens to its full sense of duty, let us do our share of it in the prevention of such ills.

Early marriage premises early motherhood, with all the satisfaction and pleasure which follow in its train. Mothers frequently believe, and state openly their conviction, that marriage may, but maternity should not, for their daughters, begin early in life. Let us aid, by timely advice, in dispelling this delusion. Eugenics will, later on, establish some proper guide. Meanwhile, natural laws, guarded and controlled, indicate safest and surest paths.

Feminine mentality suffers curious aberrations. Apart from imperfect development, aberrant internal glandular secretions may, ultimately, be found responsible for at least some of the one in 280 who, in this country, suffer innate mental weakness. The balance, in this country, represents a fine type of womanhood.

Improvement though, is certain. In many respects the State has awakened to a sense of duty, and recognizes the importance of physical development. Surf-bathing has probably done more than any other single factor, and it demands full encouragement under proper control. It still teems with unwar-

ranted vulgarity, which might, at once, be overcome by thought and small expense.

In another field, much may yet be done. The relation between mental obliquity and generative disorder has not yet been adequately established, else every hospital for the insane would have a skilled gynæcologist on its staff. Innumerable instances might be advanced in support of this contention. Eugenics justifies ablation of the ovaries in cases of *sexualis precox*, since it replaces imprisonment, under control, by freedom and indulgence of the pleasures of life.

Suicidal intent is not infrequently elicited from the subject of retro-displacement of the uterus, yet it is immediately dispelled by correction of the deformity and relief from resultant distress.

We should learn to understand the mental state and attitude of each and every patient. Hysteria should never be stamped in large letters across one's history sheet until complete elimination of every possible causative factor of organic origin.

Seek, then, the source of hysterical outbreak, which, after all, is but a train of symptoms, in some sudden fall of family status known to the world, some intimate family distress greater than the burdened mind can tolerate, or, still deeper, some deeply-rooted mental wound known only to the patient herself, or, finally, some aberrant internal secretion.

Drugs, in such cases, are poor substitutes for kind, considerate, philosophical reasoning. Without being unduly inquisitive, search for the causative factor and guide the patient's mind towards a more restful view of her unbalancing distress. Thus trusted, you will often find the *fons et origo mali*, and, without a single prescription, may lead the mind of your patient to a more rational, sensible view of the situation, and relieve her ills. There is no occultism, no charlatanism. Based upon the principles of common sense, strengthened by special knowledge, and aided by tactful application, it will assuredly win confidence and esteem. To some, such power is a great natural gift, but by all it may be acquired. I do not deny that firmness, sternness, even severity, may be required in handling some cases of hysteria, but this number is extremely limited, and even in these cases, careful investigation of causes is imperative for successful treatment.

The foundation of woman's suffering is often laid in childhood and adolescence. Interference with normal development lessens physical and mental vigour, creates scintillating mentality and fervid morality, closely allied to aberration, even if this be not definitely established. Observe females reared as hot-house plants; note the inevitable results, the physical and mental frailty, the forerunners of incapacity and invalidism throughout life. Advise parents to postpone marked differentiation in the sexes, or the relationship between them, until menstruation appears. During this transition period, special consideration is imperative regarding physical and mental effort, and proper instruction by mothers regarding the physiological function should be given. Eternal curses of girls' childhood are corsets, high-heeled shoes and closely-fitting attire, which a stupid conservatism or a pitiful ignorance permits, continuously exercising their pernicious influences. The corset is unwarranted as an article of clothing for growing girls. Fortunately, nowadays in Sydney, numerous instances present for comparison.

Study the beautiful lines of a well-proportioned Australian girl, who has never worn them, whose spinal and abdominal muscles have developed under natural conditions of freedom and spontaneous activity, aided by physical culture, with the frame and figure of a child trussed and splinted by corsets. Note the irregular curves, absence of tone in spinal and abdominal muscles and of their normal elasticity of movement; note deficient respiratory movements, and, above all, as gynæcologists, note the beginning of enteroptosis shown by the bulging projection of the lower abdomen. Remember, ever, that the abdominal cavity forms an elastic cylinder, its contents a piston constantly moving up and down within it, that the diaphragm and pelvic floor form elastic closures to the cylinder, and it will easily be realized how increased abdominal pressure by corsets and belts from above, and the limitation of normal movements of abdominal muscles, play a significant part in the causation of uterine displacements and pelvic herniæ. Such pressure surely causes the abdominal bulging to which I have referred, and which has led more than anything else to the wearing of long, straight-fronted corsets, to guard against the evil.

The upper abdomen and lower thorax cannot expand normally, and undue stress becomes thrown upon the unsupported lower abdomen and pelvic floor, which yield to the increased local intra-abdominal and intra-pelvic pressure.

Imperfect respiration implies defective blood circulation, hence diminished food and air supply to the tissues, lessened scavenging of the products of Katabolism; hence follow incomplete development, structural degeneration and functional incapacity

Many menstrual disorders surely become thus initiated by downward pressure within the pelvis, disturbing circulatory balance.

Moreover, absence of free abdominal movement, limitation in development of the abdominal and spinal muscles are important factors in causing constipation.

Rationality in dress, therefore, implies free ventilation, absence of all constriction, freedom for normal play, elasticity and developmental activity, even distribution and proper protection, according to season, against the elements.

We gynæcologists cannot admire, we must condemn, clothing which hampers movements, distorts figure, prevents development, restrains normal circulation and respiration, displaces organs and diminishes functional excretory activity.

The worst feature of high-heeled shoes becomes evident in the toppling forward of the body which necessitates compensatory recurving of the upper parts, thus throwing forward the abdomen as the

greatest point of curvature, and predisposing towards enteroptosis.

Our duty is to state unreservedly our scientific beliefs, and thus contribute in cultivating a buoyant, bright-eyed and physically endowed womanhood, and greatly minimize the suffering of the sex. Granted knowledge which we possess, mothers would surely think as we think, since our views are consistent with becoming and even smart attire.

Pregnancy especially demands observation of the above rules, and post-partem dressing requires equal attention. My invariable practice has been to avoid as far as possible, after two days, all supports, and guard against prolonged rest in bed, especially in the supine position.

Injury during delivery should be zealously guarded against, and immediate repair, whenever possible, practised. Effective immediate repair, notwithstanding claims to the contrary, is not always practicable; but attendance upon accouchement is incomplete and neglectful which fails to find and to repair all serious injuries.

The uterus should always be carefully replaced after artificial delivery. Undue haste in placental expulsion is unwarrantable. Stretching, weakening and rupture of the pelvic floor may be induced, and the uterus permanently displaced by rash procedure. Such causes are surely responsible for downward, backward displacement of the uterus in child-bearing women. We see many cases.

Heredity and the specific influence of irritation upon the occurrence of cancer must ever be remembered. For us, three special organs demand constant observation. These are the breast, the uterus and the stomach. Early recognition is essential for successful treatment. Surgery yet offers the only real aid in all cases. There is no excuse, nowadays, for failure to diagnose cancer in its early stages.

Modern gynæcology demands accurate knowledge concerning internal secretions, their economic importance, the effects of normal function and the defects and disorders arising from structural lesion and aberrant activity.

Womankind must be studied from infancy onwards.

It is inconceivable, seeing the inter-relation of all these ductless glands, that functional disturbance should occur in any one without resultant secondary effect upon others.

Bio-chemical disturbance itself may create symptoms, or these may, in the main, more truly arise from compensatory readjustment of metabolic processes. Cushing considers the hypophysis the supreme control, since its derangement will surely unsettle the whole series of glands. The pineal and thymus glands exercise their chief activity during childhood, the former undergoing marked involution at puberty, whereas the latter begin regress at that age.

The pineal gland clearly inhibits sexual development during its period of complete development and functional activity, since tumour of the gland causes or rather, more correctly, permits, premature development of genitalia, sexual and mental precocity.

Extraordinary precocious puberty, associated with abnormal growth of pubic hair and genitalia, breast and hip development, early conformity to adult form, is apparently associated with deficient or aberrant function of this gland.

Curiously, in adult animals, experiment shows that the pineal gland is of little or no consequence, or its duties may then be performed by other structures in the body.

Intimate relation exists between this gland and the ovaries, since lesion therein produces a syndrome not unlike the psychic disturbance associated with lesion of the ovary.

Even more close is the relation of the thymus to the ovaries. This remarkable organ functionates early, completes development at the end of the second year, then retrogresses and involutes about the period of adolescence, that is, upon maturity of the sexual glands. Its importance is vital, since extirpation at the height of its development results finally in death. Removal, in guinea-pigs, before puberty caused rapid development of the ovaries. It is not known whether this effect arises from removal of some inhibitory influence, or represents compensatory activity.

The parathyroids, too, are closely related to the female genitalia. Tetany of pregnancy, and following such simple operations as curettage, apart altogether from abortion, is associated, in some way, with disturbance of parathyroid secretion.

Removal of the parathyroids causes tetany, or the potentialities for its awakening, by the activity of the genitalia under irritation.

In all cases of tetany occurring in pregnancy, changes are found in the parathyroids, suggesting deficient secretion of these glands as the primary cause of the distress. Loss of hair and atrophy of nails may follow attack, showing that nutritive processes are disturbed.

Probably, in some way, these glands control calcium metabolism, as is evidenced by their condition in osteomalacia, and they surely bear important relationship to the nervous system.

Moreover, important functional antagonism to the thyroid exists, since removal of one leads to hypertrophy of the other. Possibly, instead, some coincident function exists. Resultant hypertrophy must, in such case, be compensatory.

Parathyroid extract is claimed to stop the symptoms of tetany. Opportunity for testing it has not presented, but it should be tried.

The thyroid, too, is in most intimate relationship with female genitalia, and the gynæcologist must constantly suspect aberrant disturbances met with in women.

Absence of normal secretion early in life causes infantilism, general torpor and imperfect activity of sexual life.

Curiously, infantile atrophy is most frequent in females, and, as is well known, in cretinism the genitalia remain infantile.

The treatment is obvious, but I cannot help feeling that this condition results from defective secretion

in several glands, since secondary characteristics, breasts, bodily form, subcutaneous fat, pubic hair and general feminine contour are only slightly developed. I was much impressed by observations made in two cases during last year.

We frequently meet a phlegmatic type of amenorrhœa, associated with undue fatty deposit, sluggishness, slow pulse, dry skin and unshapely form. It arises apparently from deficient thyroid secretion, since it is distinctly and often rapidly improved by administration of the extract.

Similarly, certain young girls, with dry skin and hair, cold body, sluggish mentality and signs of *dementia precox* are victims of deficient secretion.

Since a curious tangle surrounds amenorrhœa in all its various modifications, and since the indications point, under variable conditions, to deficient secretion, not only in the thyroid but in the ovaries, pituitary, pineal and supra-renal glands, our present treatment must remain for a period, at least, empirical. A wide field here alone presents for investigation. The thyroid is very closely related to the ovary. This is shown by sexual disturbances, associated with lesion of the gland, by occurrence of its disease during sexually active years, by associated amenorrhœa, inability to conceive, and, perhaps, most important of all, the unfavourable influence of pregnancy upon the disease.

The hypophysis has recently awakened considerable interest. From early childhood onward it fulfils important duty in mental, physical and genital development. The anterior portion is concerned with growth. Lesion leads to dwarfism. Hypersecretion during growing and pre-adolescent stages of life causes gigantism, whereas, after epiphyseal ossification, increased secretion being unable to increase stature, leads to bony changes in the hands, face, and feet, in short, acromegaly.

Here we must seek and use some antagonist.

The posterior lobe is concerned with metabolism, especially of sugar. Deficient secretion causes incomplete metabolism of sugar, and adiposity results. The inordinately fat, heavy-growing girl belongs to this class, and the adult analogue constitutes *dystrophia adiposo-genitalis*. Intense interest centres upon this gland in relation to development and preservation of genitalia. Before adolescence, aberrant function causes failure in development of the genitalia and secondary female characteristics, whereas, later in life, it causes genital atrophy.

Curiously, dwarfs and giants alike lack genital development, hence is shown the extremely delicate adjustment essential in the secretions of this gland and the genitalia. Presumably, the effect in one case is due to excessive, in the other, defective, secretion.

We must, in future, constantly weigh the importance of this gland in all those psychic disturbances in females usually ascribed to ovarian disturbance and classified under hysteria.

A powerful galactogogue is claimed to exist in the posterior lobe, and extracts from this gland are known to exercise specific action on smooth muscle, and, by some curious, selective action, upon the fibres of the uterus.

Deficient secretion is shown by the syndrome, subnormal temperature, lowered blood pressure, drowsiness, torpidity, diminished mental activity; conditions which may be distinctly improved by administration of extracts of the gland.

Hyperpituitarism would seem, on the other hand, to account for the temperament marked by restlessness, irritability, indecision, wakefulness and distrust, or more advanced psychasthenic conditions.

I have seen such conditions follow double ovariotomy, and hence believe that absence of ovarian antagonism in some degree accounts for it, since it is benefitted by administration of *corpora lutea*.

During girlhood, the above conditions defy education, owing to lack of concentration, thus resembling in many respects hyperthyroidism.

We do not know whether the ovaries functionate or not before puberty. Probably some internal secretion accounts for development of the female type, since ovariotomy in animals prevents development of breasts and genitalia.

Regressive changes surely follow ablation after development, but transplantation within the body deters atrophy and delays or checks psychic disturbance. I have frequently re-implanted portions of healthy ovary within the abdominal cavity or abdominal wall, without causing the slightest post-operative distress, and in some cases with benefit to the patient.

Some extremely close relation exists between the ovaries, hypophysis, thymus, thyroid and parathyroids, and we must seek therein for many causes of amenorrhœa and other menstrual disturbances. Ovarian follicles apparently, in addition to forming ova, have an internal secretion of their own.

Pregnancy produces a true *corpus luteum*, which lives, functionates and exercises great influence upon the further progress of reproduction. Secretion from this wondrous structure presumably prevents further ovulation, so that pregnancy may not be disturbed by menstruation.

The inter-relationship of true *corpus luteum*, hundreds of quiescent ovarian follicles, the fecundated ovum within the uterus, its trophoblast, its placental circulation is as fascinating as complex.

Ovarian secretion is responsible for menstruation as well as for that soft, nutritious nidum in the womb, which is prepared for reception of the impregnated ovum, yet, curiously, established pregnancy is not necessarily, thereafter, disturbed by double ovariotomy, though this process, in the absence of pregnancy, leads to regressive change in the uterus.

Even lactation may occur. We do not yet know what continues these processes. Is it some compensatory action of the hypophysis, or is some new secretion established?

Again, what guards the uterus, under normal conditions, against trophoblastic invasion? We do not

know, but are bound to assume that the true *corpus luteum* plays a significant part.

Since ovarian secretion is responsible for menstruation, it is easy to understand how excessive secretion may cause menorrhagia. Yet I have found many cases of menorrhagia associated with cystic disease of both ovaries.

Menstruation ceases *pari passu* with development of the placenta. We must assume that placental secretion is a direct antagonist of menstruation, and science may aid us ultimately in its specific use for such purposes.

After delivery, placental secretion ceases; some inhibitory influence over lactation is removed, and secretion of milk follows and continues. It has been contended that secretion continues under the influence of reflex stimulus, awakened by the child at the breast, yet lactation, once established, is difficult, in the absence of the child, to check. May we assume the action of some ferment?

Curiously, secretion in the breasts during pregnancy changes to milk when the fœtus dies, hence cessation of placental circulation seems necessary for secretion of milk. The ovaries are not completely responsible for continuance of lactation, since, once started, it will continue when they are removed. Ablation causes atrophy of the breasts when lactation is finished.

The clinical and anatomical changes, and psychic phenomena associated with the climacteric are due to hypo-secretion of the ovaries or some lessening antagonism against the thyroid. I believe this applies to cases where flushes, irritability and emotional disturbances are paramount. Here *corpus luteum* proves advantageous.

If, instead, we find adiposity, inactivity, dulness, depression and sluggish metabolism, we may assume that thyroid secretion is less active and its administration in small doses may prove beneficial.

I have not considered the internal secretions of the spleen, pancreas, liver, intestine, kidneys and supra-renals, all of which bear direct or indirect relation to the genitalia.

The whole subject forms a field, extensive, fascinating and profitable for research workers, and to them must we look for guidance.

The old order changeth. Philosophical reasoning and kind, considerate, guiding advice will often, better than drugs, aid in functional nervous disorders.

Deficient or excessive secretion must be identified. Administration of glandular equivalents must aim towards re-establishment of compensatory balance

Great advancement promises. Prevention of disease in women presents an enormous, all-important field for Departments of Public Health.

One wonders why they remain so inactive.

It must be that only we, who are constantly engaged in operative work, adequately grasp the colossal destruction that gonorrhœa and other infective processes, all controllable, are causing among our women, the very vitals of our country.

Gonorrhœa and syphilis should be controlled, and abortionists granted no quarter. Health Departments should awaken to this full sense of duty, should seek expert advice, and, at any cost, stamp out these loathseme diseases and practices.

I have opened rather than covered an extensive field for thought, in hope that our minds may keep in touch with modern advancement in gynæcology.

I wish to acknowledge my indebtedness to the teaching and writings of the late Dr. Balls Hedley, and to Dr. Bandler, of New York.

Reports of Cases.

DELAYED STRYCHNINE POISONING.

By **Alban Best, L.R.C.P. et S.,**

Heyfield, Victoria.

A short time ago I was sent for to see a man who was supposed to be recovering from a drinking bout. The patient, J.D., was a well-developed farmer, about 50 years of age. He was in bed when I saw him about 4.30 p.m., and appeared to be fairly comfortable. His face was flushed, the pupils were dilated, the pulse full and about 80 per minute, and the breathing deep but not stertorous. He was easily roused, and understood what was said to him. His speech was somewhat thick and indistinct. He vomited some clear, brown fluid, which did not smell of whisky. As he appeared to be "coming round," I gave his relatives some advice and left.

About an hour later—5.30 p.m.—I was again sent for, and was informed that he had said that he had swallowed strychnine. When I arrived the second time, he was apparently in the same condition as before. A few minutes later, however, he became suddenly convulsed. The attack lasted for about ten seconds. The whole body participated in the tetanic movements, but as far as I could judge (he was lying on a feather bed) there was no opisthotomos, and very little *risus sardonicus*. After the convulsion was over, his pulse was quicker, his breathing deep and his head and chest covered with sweat.

About 20 minutes later, *i.e.*, at 6.20 p.m., he had another convulsion, of the same type and duration as the first.

He was given a half drachm of tincture of iodine, followed by a drachm of bromide of potassium. Shortly after the bromide I gave him 12 grains of tannin. I also injected a dose of apomorphine. As soon as the stomach had been emptied, 20 grains of bromide of potassium were given, and this dose was repeated after every second convulsion.

The convulsions continued until midnight at intervals varying from 15 minutes to 45 minutes. Each one lasted for about 10 seconds, and was similar to the first attack. Toward midnight he became more conscious, and was aware when the convulsions were coming on. He called out at the onset of each. In the intervals he apparently fell into a sleep.

No further convulsions occurred after midnight, and from that time he made a rapid recovery.

The history of the case, which I gathered in disjointed pieces, and subsequently put together in proper order, was as follows:—

He had started early in the morning from home with a bottle of strychnine to prepare apples for poisoning rabbits. On his way to his destination, he bought a pint of whisky at about 8 a.m. Shortly before 10 a.m., he was observed by a man to be staggering along the road toward the town. He was seen to take a large bottle out of his pocket, to drink some of the contents, and then to throw the bottle away. He then repeated the same performance with a smaller bottle. This bottle was found at a later date, and contained crystals of strychnine hydrochloride. He then staggered on about 100 yards and collapsed on the

road, outside a blacksmith's shop. The blacksmith pulled him on to the grass at the road-side, and left him to "sleep it off."

At about 3 p.m., as he was apparently still "sleeping it off," his friends thought it advisable to take him home. This was carried out, and at 4.30 p.m. I first saw him.

The first tetanic seizure noted occurred at 6 p.m., *i.e.*, eight hours after he had taken the strychnine. I assume that he must have swallowed a large quantity of the poison, on account of the manner in which he drank from the two bottles. It is possible that he spat some of it out, or that he vomited immediately after swallowing it. In any case, it is quite impossible to estimate the quantity of the alkaloid taken, or the quantity retained and absorbed. But it appears to be quite certain that the absorption was delayed considerably by the acute alcoholic poisoning which preceded it. Under ordinary conditions, the convulsions of strychnine poisoning set in from 30 to 60 minutes after the poison is taken. It is rare for convulsions to occur later than one hour, and unless the patient had some seizures before he was brought home, it would seem as if the eight hours' interval was almost, if not quite, unique. In another respect the case is unusual. There can be no doubt that the poisoning was severe. The number of seizures and their frequency prove this. But in spite of the fact that the man was suffering from severe strychnine poisoning, the individual attacks were unusually short. The usual duration of a strychnine convulsion is from 30 to 80 seconds, while at times it lasts several minutes. The absence of prodromal signs before the early convulsions is not uncommon, and it is this fact and the fact that the patient was fairly easily roused when I saw him in the afternoon that lead me to the belief that the convulsion at 6 p.m. was actually the first. Crying out before the convulsions appear has been described by many observers, and is usually associated, as in my own patient, with late and not with the early attacks.

As far as I am aware, the toxicology of strychnine on nerve cells already attacked by alcohol has not been worked out scientifically, but the work of H. Meyer would suggest that a partial solution of lipoids by ether, chloroform or alcohol might block the cells and thus delay the anchoring of the alkaloid. If this were so, it would at the same time explain the beneficial action of chloral and chloroform in the treatment of strychnine poisoning.

Naval and Military News.

As we go to press, the report has been received of the death from wounds of Colonel Henry Normand MacLaurin, B.A., while fighting in the Dardanelles. Colonel MacLaurin was the fourth son of the late Sir Normand MacLaurin, and brother of Dr. Charles MacLaurin, of Sydney. The deceased officer was 37 years of age, and received his first commission in 1899. He was a graduate of the University of Sydney, and followed the profession of barrister. He had been in command of the 1st Infantry Brigade since the outbreak of war.

The following appointments have been announced in the Commonwealth *Gazette*, No. 32, April 24, 1915:—

Army Medical Corps.

To be Major—

Honorary Captain J. R. Webb, A.A.M.C. Reserve.

To be Captains—

Captain (temporary) J. B. F. McKenzie, A.A.M.C.

Captain (temporary) J. C. Mayo, A.A.M.C.

Captain (temporary) W. J. Stack, A.A.M.C.

Honorary Captain F. T. A. Lovegrove, A.A.M.C. Reserve.

Honorary Captain J. C. P. Strachan, A.A.M.C. Reserve.

Honorary Captain A. Goldstein, A.A.M.C. Reserve.

2nd Military District.

A.A.M.C.: George Cumming Byrne to be Captain (provisionally and temporarily).

A.A.M.C.: Gordon Alick Renwick, Edward William Buckley, and John McPherson, to be Captains (provisionally and temporarily).

A.A.M.C. Reserve: Donald Smith to be Honorary Captain, Herbert Fabian Alsop to be Honorary Captain, Frank Marshall, Ernest Vale Hawkins, and John Houghton Bradley, to be Honorary Lieutenants.

3rd Military District.

A.A.M.C.: Captain (provisional) G. A. D. McArthur is transferred to A.A.M.C. Reserve and to be Honorary Captain.

A.A.M.C. Reserve: Francis Bartlett Crawford to be Honorary Captain; Frederick Edmund Oaten to be Honorary Lieutenant.

4th Military District.

A.A.M.C.: The provisional appointments of Captains C. Yeatman, A. R. Clayton, J. C. Mayo, C. E. C. Wilson, A. W. Hill, G. M. Hains, W. J. Close, J. W. Browne, and F. Burden are confirmed.

5th Military District.

A.A.M.C. Reserve: Alfred George Highman to be Honorary Lieutenant; Honorary Captain N. B. Watch is transferred to A.A.M.C., and to be Captain (provisionally and temporarily).

6th Military District.

A.A.M.C.: Claude Fulton Hodgkinson to be Captain (provisionally and temporarily).

We learn that Colonel W. J. Will, of Dunedin, New Zealand, who is at present in London, has been placed in charge of the New Zealand Division of the Australasian Expeditionary Force. Dr. W. H. Will, the son of Colonel Will, has been promoted to the rank of Captain, and is serving with the Field Ambulance of the New Zealand Expeditionary Force.

Dr. Kenneth MacCormick, of Wellington, has been appointed Captain in the New Zealand Army Medical Corps.

We are informed that among those accepted for service with the 3rd Australian Hospital, which will leave Australia within a short time, are Col. Fiaschi, Sir Alexander MacCormick, Dr. R. R. Stawell, Dr. Sydney Jamieson, Dr. A. M. Cudmore, Dr. J. Adam Dick, Dr. W. Trethowan, Dr. Morton, Dr. J. A. H. Sherwin, Dr. Clarence Read, Dr. Lockhart Gibson, Dr. W. Kent Hughes, and Dr. W. E. Upjohn. The full list will be published in a subsequent issue.

HOSPITAL SATURDAY FUND IN SYDNEY.

The annual street collection in aid of the hospitals took place in Sydney on May 1, 1915. The amount collected in the streets was £9,164 17s. 1d., which is £1,461 18s. more than the amount collected in 1914, and constitutes a record. Together with indoor subscriptions, etc., the total received, as announced on May 3, 1915, was £10,060 13s. 7d., which is £1,369 18s. 10d. more than the total collected from all sources in 1913. The President of the Board is Mr. Justice Gordon, who exhibited great energies in the organization of the collections.

FRIENDLY SOCIETIES IN NEW SOUTH WALES.

The attention of members in New South Wales is directed to a scheme which received the approval of the Friendly Societies' Association on April 30, 1915, in connexion with the engagement and payment of medical officers of lodges. It has been suggested that if branches were instituted in each district, the arrangements in regard to the appointment of medical officers and in regard to the requirements of the locality would be more advantageously effected than they are under the existing conditions. The final selection, however, would be left to a central board. Each branch would be required to pay a capitation fee of a sum not exceeding 6d. per member per annum to the district board; one-half of this sum would be paid to the central board for the purpose of covering the expenses incurred in travelling, etc. All Friendly Societies are invited to modify their constitution, so that the scheme might become uniform and the success of the same might be guaranteed. Members will do well to consider the effect which this plan will have on the appointment of medical officers. The scheme admits of negotiations being conducted between the Branch Council and the Central Board, while the local requirements and the circumstances obtaining in each district would be made known to the central board and would thus be available for those undertaking the negotiations.

The Medical Journal of Australia.

SATURDAY, MAY 8, 1915.

The Wassermann Reaction.

A discussion on the nature and significance of the Wassermann reaction took place at a meeting of the New South Wales Branch of the British Medical Association on April 30, 1915 (see page 433 of this issue). Some of the speakers raised the question of the specificity of the reaction, and Dr. Burton Bradley even went as far as to throw some doubt on its diagnostic importance. It is not easy for the hard-worked general practitioner to keep himself in formed on subtle points in laboratory work, and it may, therefore, be of some use if an attempt were made to lay the case of this reaction before our readers, using as simple language as the conditions admit of.

Wassermann, as is well known, built up the test, which is now used all over the world for the purpose of diagnosing syphilis, on the academic work of Bordet and Gengou. These observers demonstrated that if an organized substance, which when introduced into the animal body calls forth the production of its specific antibody or antagonist, be mixed with this antibody, union between the two substances took place only in the presence of normal, unheated serum. It is believed that the connecting act between the two substances is effected by what is spoken of as the complement of the serum; this may be a substance of the nature of a ferment, or a property of one of the constituents of serum. They also showed that after this complement had been fixed in the combination of the two substances, usually known as antigen-antibody, it would not be available for a second pair of antigen-antibody, namely, red blood corpuscles and the specific antibody, called into existence by the injection of the red cells into a suitable animal. This red blood corpuscle antibody, together with complement, is capable of dissolving the corresponding red blood cells in a test tube. In the ordinary complement deviation or deflection experiment, the first pair of antigen and antibody, when mixed with a quantity of normal serum sufficient to effect complete solution of a given quantity of red cells in the presence of the hæmolytic amboceptor or antibody, will fix all the complement, and, therefore, if the red cells and the amboceptor be added after the completion of the first mixture, no solution of the red corpuscles will take place. The explanation is that the necessary complement was already fixed by the first antigen-antibody pair. Wasserman was wrong in one assumption, namely, that the antigen employed by him was a syphilitic substance. He was under the impression that the extract of the liver of a syphilitic infant supplied spirochaetes for the reaction. It has been shown that normal liver will do as well as syphilitic liver. More than that, it has been shown that chemical substance allied to the fats, called lipoids, which are present in certain quantities in liver and in larger quantities in brain substance, can be substituted for the extract. Now, it is quite reasonable for men working with these substances to conclude that because it has been shown that the antigen employed in the Wassermann test is not specifically syphilitic, the antibody will be non-specific. But it is equally reasonable to assume that the specificity of the reaction is not altered by the discovery that the original explanation is not a true one. It is impossible at present to offer a certain explanation for the nature of the reaction. But in view of the fact that from a practical point of view, the reaction is extremely sensitive, and that it is reliable in distinguishing between syphilitic and non-syphilitic affections, a true specificity must exist. On the assumption that the so-called antigen is a lipoid, it would seem that the serum of syphilitics contains a substance which can fix complement in the presence of lipoid. Recent researches in another branch of immunity, namely, anaphylaxis, have demonstrated that complement can be used up in the dissociation of certain proteid bodies. In the instance of the anaphylactic response, the product formed is intensely toxic. But the same mechanism, in other instances, may produce entirely harmless bodies. Friedberger suggested the name of anaphylotoxin for the substance contained in the serum of animals sensitized to protein. It is unnecessary in this place to discuss whether such a substance really

exists as a chemical entity, but the fact remains that the serum of these animals undergoes a change, whereby a highly toxic product is prepared when complement is present, but not when it is absent. It is possible that in the Wassermann reaction, the serum of the syphilitic person exercises a property when acting together with the complement of normal serum of disintegrating lipoids in solution. If this corresponds with fact, the reaction must be regarded as specific, since it can be shown that this quality of serum is present to a marked degree in syphilis alone.

If an explanation of this kind be accepted, it must be assumed that the reaction would be quantitative. In other words, the more marked the power of the serum to fix complement, the greater the source of this property, i.e., the more intense the infection. Any refinement which can measure, even roughly, the quantity or strength of the serum in fixing complement in the presence of lipoids, must, therefore, be regarded as a valuable help to the differential diagnosis. The practitioner should not be content to learn that the Wassermann reaction is positive or negative, but should be informed in what degree the reaction is positive. He will find the quantitative results of the reaction of high value in the treatment of his patients.

THE TASMANIAN HOSPITALS.

It is a little difficult to follow events in Tasmania, in so far as the hospitals are concerned. A short time ago a Royal Commission of one person was appointed to enquire into the hospital question, and a report was submitted. The Commissioner was either incompetent to deal with the subject of the enquiry, or was willing to let his findings coincide with the views of the Minister, who had effected his appointment. In either case, it was abundantly clear that the evidence was not taken in a manner calculated to elicit information, and that the report was merely a summary of the Commissioner's views, or possibly of the views of those who placed him in his unenviable position. In view of the extraordinary result of this primary enquiry, a movement was set afoot for the purpose of having the charges made by the Commissioner against the management of the Hobart General Hospital properly investigated. We have already had reason to criticize the step taken by the Government to stifle public opinion by appointing the same Commissioner, together with two departmental gentlemen, to sit in enquiry on the former's own report. This is certainly proof that the policy of the Government was made first, and a pretence at collecting facts was carried out later. The third stage in the comedy has just been foreshadowed in the "Mercury" of April 28, 1915. It is reported that the Chief Secretary, The Honourable John E. Ogden, is having a Bill drafted to provide for the State control of Tasmanian Hospitals. In other words, the cast-iron policy, which found so willing an exponent in the Royal Commissioner, in spite of all the facts concerning hospitals and opinions held on the subject, is to form the basis of proposed legislation. Some details of the Chief Secretary's scheme are given. It is proposed to establish a central board of control, of which the Chief Health Officer would be the chairman. We cannot imagine a more disastrous proposal. If there be a central Board, at least the medical profession and the public would have the right to expect that a man with an open mind, and with some knowledge of hospital management and administration, should be at the head of affairs. It is usual for a Board to appoint its own chairman, and unless the Chief Secretary intends to put up a dummy Board, which is chosen in order that the cast-iron policy of the members of the Government is to be forced through at all costs, this centralization of authority would defeat its own ends if placed under the guidance of Dr. McClintock.

The proposed legislation is to contain provisions for the setting up of a register of subsidized hospitals. It is suggested that the autonomy of the hospital boards is to be preserved, but the central authority should have certain powers, and the Government should have a definite number of representative among the nine members of each Board. These matters are not very definite as yet, and we learn that it is the intention of the Chief Secretary to submit the draft Bill to the Medical Board of Tasmania before it is presented to Parliament. The Chief Secretary would be well advised if he invited

PLATE ILLUSTRATING MAJOR ROBERT DICK'S ARTICLE.

(Skiagram by Captain Hirschell Harris, R.A.M.C.)

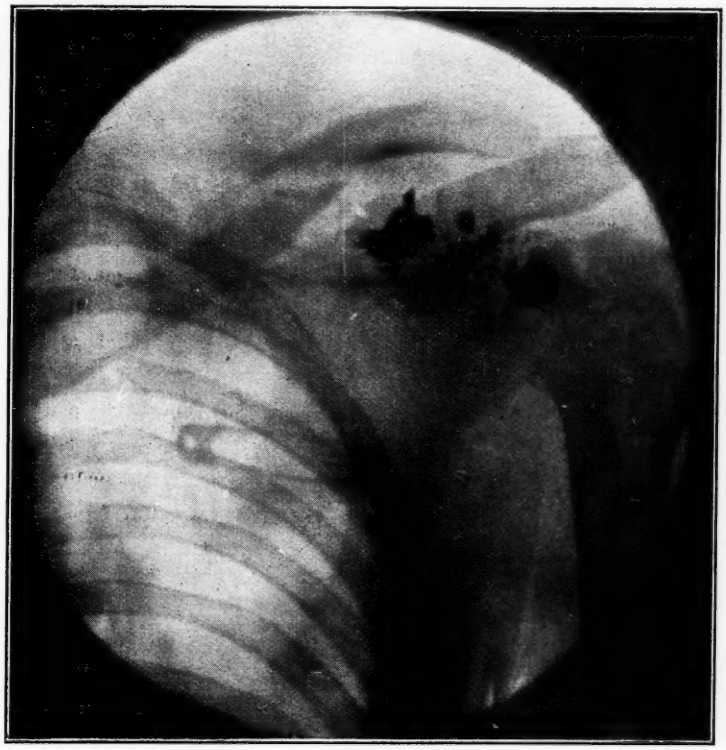

FIG. I.

Fragments of Shrapnel and Pieces of Shoulder Badge, with Fracture of Bones of Shoulder Girdle.

PLATE ILLUSTRATING MAJOR ROBERT DICK'S ARTICLE.

(Skiagram by Captain Hirschell Harris, R.A.M.C.)

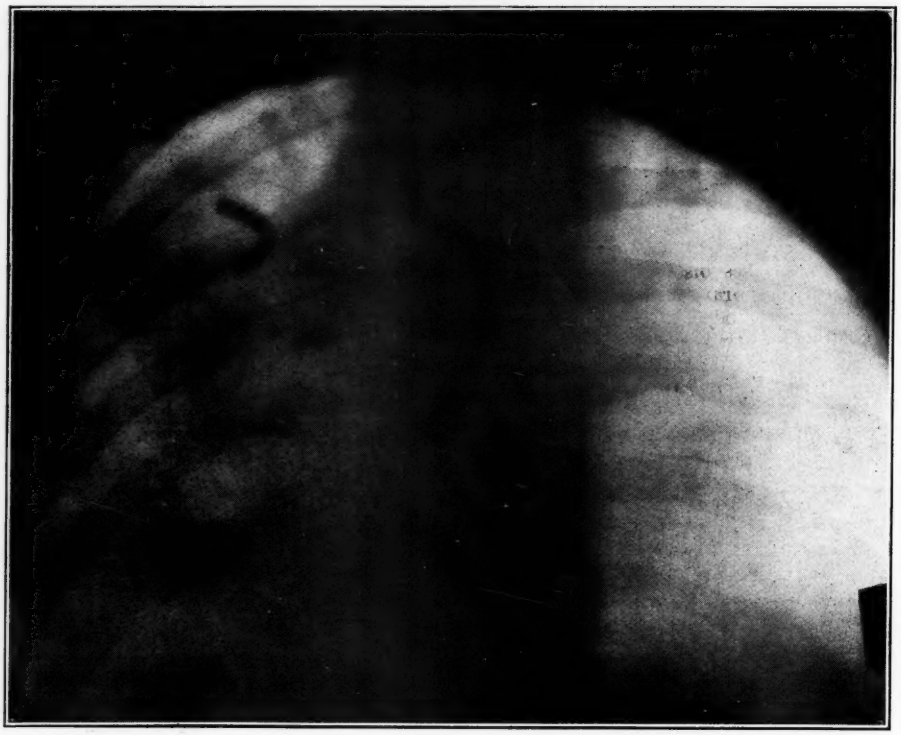

FIG. II.

Pieces of Trouser Brace Fitting in Anterior Mediastinum.

the Council of the Tasmanian Branch of the British Medical Association to confer with him on the provisions of the Bill. It is premature to discuss any of the details until the text of the Bill is in our hands, but it is not too early to express the opinion that the medical profession will oppose any measure which enacts the easy policy of a few individuals, whose knowledge of hospital management is strikingly infantile.

THE SHORTAGE OF DOCTORS.

It is of the utmost importance that the medical profession should be acquainted with the conditions of supply and demand of medical men at the front and in the various base hospitals, in order that those who are willing to offer their services, and can make arrangements for their patients during their absence, should know what the position really is. It is, therefore, unnecessary to apologise for returning to this important subject. In addition to the need for medical volunteers referred to last week, there appears to be an urgent need for men for some of the improvised hospitals in London and the South of England. The Government is fitting up warehouses, biscuit factories and other large buildings as temporary hospitals, where from one to two thousand wounded can receive treatment. While it must be admitted that the conditions are not ideal for the soldiers, it is possible that the work carried out in surroundings of this kind may be extremely valuable. We have information that these improvised hospitals have been established because by their means a large number of wounded soldiers can be treated by a few medical practitioners. If the men were to be placed in small institutions and private homes, about 3000 more doctors than are available would be required. In addition, there is a serious shortage of nurses for this work.

Sir Alfred Keogh's appeal, to which reference was made last week, was tempered by the statement that the military authorities had no intention of depleting the profession left to attend to the civil population. But in spite of this intention, we learn that the civil population in some parts of England is being neglected to some extent, because the medical practitioners are driven day and night in attending to the immense number of the wounded.

THE CURE OF INSANITY.

There are many people who are highly sceptical about the possibility of recovery from affections of of the mind. Once insane, the patient is regarded with suspicion for the rest of his life. Modern psychiatry, however, has demonstrated that while some forms of mental disease are incurable, others are amenable to treatment, and that cure may be complete and permanent. The change wrought by treatment in hospitals where treatment is carried out, as compared with the old asylum, where restraint alone was effected, is extremely striking. In this respect, psychiatric clinics and institutions, where early treatment can be employed without the embarrassment of certification, provide opportunities for persons whose lot under the old regime would have been quite hopeless. But there is a large class of patient, who, while not suitable for treatment in a clinic or institution of this kind, are yet curable after the lapse of time and the adoption of tedious forms of treatment. The difficulty, which these patients have to meet, lies in the fact that they have to overcome the obstacles placed in their way in starting life over again. These patients recover, and may obtain their discharge from the Hospital for the Insane, but they have nowhere to go, no friends to help them, and no means of gaining a livelihood.

In Sydney, an excellent organization is prepared to act as guardian to these handicapped persons. This is called the After Care Association. At the Annual Meeting of this Association, held on the last day of April, Lady Cullen, the President, put in a plea for the discharged mental patient. She said that it was not usually announced to the world that the persons they were looking after had been in a mental hospital. The public, however, must be taught that many recovered patients have proved themselves great successes in employment at a later date, and that prejudice against a person who has had a mental affection must disappear in the light of the experience of modern psychiatry.

THE DANGERS TO BE AVOIDED.

A correspondent has called our attention to a folder which has been issued by the Liverpool Medical Institute, dealing with some dangers a soldier may avoid. A copy of this folder is given to each member of the Expeditionary Forces leaving the shores of Great Britain. The front page bears the following inscription, under the title:—

"'tion!"

> You are going to fight in order that your children and your children's children may enjoy the heritage of liberty. See to it that no action of yours will rob them of a heritage that is as priceless as liberty—the heritage of good health.

The inside contains a direct account of the significance of gonorrhœa and of syphilis, described in simple language, and an urgent appeal to the soldiers not to risk an infection by indulging in illicit intercourse. The pamphlet sets out the grave dangers of both forms of disease, and ends with the following sentence: If, with all these dangers before him, a man is fool enough to expose himself to infection, and gets one or other of these diseases, he should at once "report sick."

The military authorities would do well to imitate this example in Australia, and to give to each man leaving with the Expeditionary Force a folder with this warning set forth in clear and readily understood sentences. The folder would, we are convinced, act as a deterrent in a number of instances.

The Registrar of the New Zealand University has been arrested on a charge of the embezzlement of £1000 of the funds of the University.

Abstracts from Current Medical Literature.

THERAPEUTICS.

(143) "Bacterins" and Tuberculins.

The introduction of the term "bacterin" into American literature appears to be becoming general. B. A. Thomas attempts to summarize the prophylactic, diagnostic and therapeutic value of "bacterins," by which he means vaccines, and tuberculins (*Therap. Gaz.*, January 15, 1915). He cannot conceive a rationale which would account for any beneficial action of bacterins in acute or diffused affections, in which the organism is already overloaded with the products of a living antigen. They should therefore be reserved for chronic or possibly subacute, localized infections. They may lead to death if applied in acute affections. If the individual's defences are great and his infection is slight, an inoculation of bacterin may increase his specific antibodies. The causes of failure are given as follows:—(i.) The utilization of the improper bacterium, (ii.) the routine employment of stock instead of autogenous bacterins, (iii.) the ignorance as to administration in regard to size of dose or intervals, and (iv.) the disregard of commonly associated conditions. These various points are enlarged upon. In regard to the employment of the wrong bacterium, very little information is given. On the question of dose, the author states that this must be cautiously gauged by the age of the patient, the nature and gravity of his illness, the acuteness or chronicity of the affection, and his debilitated or toxic state. The sicker the patient the smaller the dose should be. The initial inoculation of bacteria of the virulent group, e.g., streptococci, gonococci, etc., may be 25 to 50 millions. In the case of less virulent bacteria, the dose may be from 50 to 100 millions. He adds that in many diseases the guidance furnished by determinations of the opsonic index is indispensable for the proper execution of bacterin therapy. The safest rule, he continues, is to give a small or assuredly harmless dose; if no reaction follows a second injection twice the size of the first may be given in two or three days. This method is repeated at intervals of between three and seven days until reactionary phenomena are observed. A few words are devoted to the question of sensitized bacterins. This is followed by a brief reference to anaphylaxis, and by an account of the various forms of tuberculins in common use. The second part of the article deals with a number of diseases, for which bacterins have, in the author's experience, proved useful. Acne, furunculosis, subcutaneous abscesses, ulcers, cellulitis, impetigo and sycosis, sinus and fistula, actinomycosis, variola and bubonic plague are dealt with in turn. He has found 0.001 mgr of actinomycotin useful in superficial localized lesions. In regard to variola, he states that staphylo-bacterins have proved of use in diminishing pitting. The next group is that of diseases of the genito-urinary system. Pyelitis, pyelonephritis and cystitis due to *b. coli*, b. tuberculosis, Friedländer's bacillus, *b. typhosus*, *streptococcus pyogenes*, *staphylococcus* and *m. lanceolatus* are said to be benefitted by bacterins. The consensus of opinion does not favour the use of gonococcus bacterin in acute urethritis. On the other hand, gonococcus bacterin is said to be of value in acute epididymitis. Brilliant results are reported in cases of vulvo-vaginitis in children. Polyvalent gonococci are used. In turning to diseases of bones and joints, the author states that bacterins have done more harm than good in acute osteomyelitis. The therapy is of great value in infections of the eyes. Strikingly good results are recorded in bronchitis, and in pneumonia it may be beneficial in unresolved cases. In *pyorrhoea alveolaris*, tonsillitis and entero-colitis, bacterins may effect a cure, if properly employed. In mentioning the value in enteric fever, he refers solely to prophylactic inoculations. The same applies to dysentery and cholera. In connexion with cancer, he mentions that Coley's treatment of sarcoma is worthy of trial. Apparently a large number of properly selected cases have been cured by administering daily inoculations. On the other hand, the author admits that all attempts to produce an efficient tumour extract or emulsion for the treatment of carcinoma or sarcoma have proved futile.

(144) Oxypinene in Pulmonary Tuberculosis.

Waters (*Medical Record*, February 13, 1915) states that when the vapour of pinene is exposed to a current of ozonized air, prepared by the action upon dry air of a high tension electrical discharge, a combination occurs between the pinene and the oxygen, resulting in the production of a dense white vapour, to which the author has given the name oxypinene. This vapour possesses the valuable therapeutic properties of pinene, without its irritating effects upon the kidneys and urinary tract. It has been shown to have a germicidal effect upon cultures of various bacteria. Clinical observations on 21 patients suffering from pulmonary tuberculosis were continued for several months, during which the treatment by oxypinene was carried out. Several of these patients were selected purposely because of the severity of their lesions, and although they died subsequently, the good effect of this method of treatment was apparent. Examinations of the blood showed that under this treatment there was a constant tendency for the cellular elements and the hæmoglobin to approach their normal ratios, and especially for the erythrocytes, the lymphocytes, and the large mononuclears to be augmented, and for the hæmoglobin percentage to be increased. The vapour also seemed to have a beneficial effect in relieving the dry, irritating cough, and in rendering the sputum more liquid; at the same time the bronchitis disappeared. The temperature, pulse and respiration all improved. The author sums up the results of his researches as follows: Oxypinene possesses the properties of refined oil of turpentine, minus its irritating qualities. It has a marked germicidal effect upon certain organisms, and is germicidal to the tubercle bacilli in the sputum. When inhaled it does not produce irritation of the respiratory tract, neither does it cause frontal headache or renal irritation. It is a valuable expectorant. It also acts as a mildly stimulating diuretic. It improves the appetite and digestion, and indirectly the nutrition. Its use in pulmonary tuberculosis has been beneficial, not so much from its bactericidal action upon the tubercle bacilli, as by its effect upon the associated organisms and its hæmatinic power.

(145) Colloidal Iodine and Serum in Tetanus.

Auregan (*Lancet*, February 27, 1915) describes the method used by him in the treatment of tetanus in a supplementary hospital. He publishes a number of cases in which he employed colloidal iodine associated with antitetanic serum. He concludes from these cases that a manifest influence is exerted by the treatment, inasmuch as 58.8% of the patients survived. The treatment must not follow a stereotyped formula, but should be individual. Unnecessary interference should be avoided. It may be necessary to perform tracheotomy to combat fatal asphyxia, and to administer camphorated oil in frequently repeated doses to combat threatened cardiac failure. He never gives more than 5 grammes of chloral per diem. Colloidal iodine can be administered in the form of intra-muscular injections, or as a local dressing for the wounds. In neither case does it cause any reaction, pain, or rise of temperature. It is quite harmless. It has been proved to be bactericidal and antitoxic to a variety of bacteria. It is not known whether it enhances the action of antitetanic serum, or whether it acts by catalysis, or by stimulating phagocytosis. These and other matters are being subjected to further investigation.

(146) Boric Acid in Skin Diseases.

D. W. Montgomery holds the opinion that boric acid is much more useful in affections of the skin than is usually supposed (*Journ. Americ. Med. Assoc.*, March 13, 1915). He points out that it is a mild, non-irritating antiseptic, and has soothing properties. Further, the addition of boric acid to water prevents the detrimental action of the solvent by increased osmosis. A solution of approximately normal tension may be applied, and in this way the action on the horny epithelium is distinctly beneficial. For acne, he uses a solution of three tablespoonfuls to 3 quarts of hot water for the purpose

of soaking the face. In pyogenic infections of the skin, boric acid is of great value. In furuncle gauze dipped in saturated boric acid solution (about 4%) is applied, and covered with oil silk. A poultice of boric acid and starch is also useful. Suppurative folliculitis of the vibrissae of the nares is best treated by dipping swabs of absorbent wool into hot boric acid solution, and inserting them into the nostrils. The swabs should be changed every ten to fifteen minutes. Calomel (12%) or xeroform (12%) in vaselin is then rubbed in. Boric poultice may be used with advantage in impetigo contagiosa for the purpose of softening the crusts. After these have been removed, an ointment of one part of *ung. hydrarg. ammoniat.* and two parts of *ung. zinci oxidi* is applied. He advises boric acid for a streptococcal infection met with in infants, called perleche. In paronychia, boric acid acts as an antiphlogistic antiseptic, and as an abortive. He also recommends it in the treatment of ulcer cruris.

UROLOGY.

(147) The Mortality in Prostatectomy.

Chute (*Boston Med. and Surg. Journ.*, November 26, 1914) gives an account of his experience of prostatectomy. He states that he has performed the operation 58 times. The main point in regard to good results is the adequate function of the kidneys. He regards the following as danger signs:—The excretion of phenol-sulpho phthalein (under 30%) within two hours; a low specific gravity of the urine; a high blood pressure; symptoms of disturbance of the digestion and dry tongue, indicative of chronic uraemia. He has come to the conclusion that the risk of the operation is greatly increased when the bladder is much distended, especially in the absence of pain. When the bladder is infected in these cases there is frequently a certain degree of immunity, which may stand the patient in good stead. He is suspicious of the kidneys in every case in which there is retention of urine. In doubtful cases he recommends drainage of the bladder by means of a cystotomy before performing the operation, provided that the bladder is not infected. When the bladder is infected he drains by catheter. Prostatectomy should not be performed for several weeks or months, when the kidneys recover. He does not consider the danger of post-operative hæmorrhage great, provided the kidneys are functionating well. He finds that drainage of the bladder by means of a large tube through the bladder wound is very important and useful.

(148) Operations on the Vesiculæ Seminales.

Squier (*Boston Med. and Surg. Journ.*, June 11, 1914) deals with the various indications of vesiculotomy. In his opinion, Fuller's operation should be performed in the following cases:—(i) Cases of acute suppurative inflammation and formation of abscess following an attack of urethritis. (ii) Cases of recurrent epididymitis due to urethritis and vesiculitis. (iii) Chronic cases of vesiculitis of unusual obstinacy, (a) if there is severe pain in the perineum, (b) when associated with chronic rheumatism. The diagnosis is based on the presence of the following signs and symptoms. A history of urethritis or stricture; discomfort in the perineum, increasing during difficult defæcation; tenesmus; frequent erections without any sexual stimulus, and frequent nocturnal emissions, often blood stained; the presence of blood in the seminal fluid. In the cases in which the diagnosis of rheumatism is made, infections from other foci, such as chronic tonsillitis, otitis media, etc., must be excluded. Although the interrelation between chronic arthritis, rheumatic affections, and infection of the seminal vesicles is not properly understood, many capable observers recognize the value of vesiculotomy in these cases.

(149) Some Problems in Connexion with Nephritis.

H. Arnold (*Boston Med. and Surg. Journ.*, April 16, 1915) describes the details of some cases of interstitial nephritis, and discusses the value of diet in the treatment of this condition. Many patients do well on a diet containing a reduced quantity of protein. The degree to which the protein should be cut down depends on the amount of impairment of function of the kidneys. A diet containing small amount of proteins tax the kidneys less than a diet rich in protein. He has come to the conclusion that in mild cases 90 grammes of protein may be allowed, while in severe cases the amount should be reduced to about 40 grammes. If the patient improves under this treatment, and especially if the blood pressure falls, it is unnecessary to carry out the various functional tests, but in all other cases some valuable information may be obtained from them. He states that when œdema is present, and the blood pressure remains high, in addition to a reduction of proteins, it is wise to reduce the quantity of salt taken. He is of opinion that continued study and observation will lead to the recognition of at least two or three distinct varieties of chronic interstitial nephritis.

(150) Fulguration for Tumours of the Bladder.

H. L. Kretschmer (*Journ. Americ. Med. Assoc.*, March 27, 1915) records his experience of the treatment of papillomata, papillary carcinoma, other forms of carcinoma and polyps affecting the bladder by fulguration. The technique is described, and the author states that three or four sparkings of varying duration usually suffice for the purpose. In papillomata, eight of ten patients were completely cured, one was still under observation, and one had passed out of observation. One patient, with a papillary carcinoma, was subjected to the treatment. The tumour was found near the left ureteral orifice. As excision was refused by the patient, fulguration was tried. Four sparkings had been carried out. The tumour was removed by this means, and recurrence had not taken place at the time of reporting. No mention is made of the interval. He treated six patients, who were suffering from carcinoma of the bladder. In three cases, the treatment had no effect. In three others, a suprapubic resection was performed and bipolar sparking employed at the operation. In one, a local recurrence took place within six months; the second patient died some months later of recurrence, and the third was lost sight of. The effect of fulguration on polypi was satisfactory.

(151) Prostatectomy without Irrigation.

Rockey (*Boston Med. and Surg. Journ.*, March 12, 1915) is strongly in favour of avoiding irrigation of the bladder after the operation of prostatectomy, at all events during the first ten days. He is of opinion that it is highly important to leave the prostatic wound alone as much as possible, so that it may retract well. The formation of blood clots in the cavity left by the removal of the organ is of value, in that it favours healing by granulations. The author advises an incision in the abdominal wall of not more than two or three inches in length. After the removal of the prostate he fixes the bladder to the muscular layer by means of two suspension sutures. By this means the formation of a space is avoided. He inserts a large drainage tube into the vesical wound, but leaves it short, so that it does not come in contact with the posterior wall of the bladder. No catheter is inserted into the urethra for the first ten days. An absorbent dressing is applied. The bladder is not irrigated during the first ten days. At the end of this time the tube is removed, and a catheter is placed in the urethra.

(152) Sarcoma of the Testis.

Codman and Sheldon (*Boston Med. and Surg. Journ.*, February 19, 1915) have analysed the cases of sarcoma of the testis operated on at the Massachusett's Hospital in Boston during the past 40 years, with the object of ascertaining the ultimate results of the treatment. They found that 56 patients could be traced. Of this number 13 were living at the time of the investigation. The interval between the operation and the investigation averaged nine years. The minimum time was two years. Ten patients had died of some independent disease. The total mortality was therefore 59%. Only one case out of a total of 64 observed started in the epididymis. In four cases the sarcoma had developed in an undescended testicle.

British Medical Association News.

SCIENTIFIC.

A clinical meeting of the Victorian Branch was held at St. Vincent's Hospital on April 21, 1915, Dr. Honman, the President, in the chair.

Dr. D. Murray Morton showed two cases of *bone transplantation*.

1. The patient was 50 years of age. She had had a swelling of the distal end of the right forearm for 12 months. She had complained of pain and tenderness in the limb for 18 months. There was a history of carcinoma of the breast five years previously. A large, rounded, irregular swelling of the size of an orange was situated at the distal end of the right radius. Dr. Morton was uncertain whether egg-shell crakling could be elicited. A skiagram was exhibited. The growth had been removed and transplantation of a piece of the tibia into the forearm had been carried out.

2. The second patient was 49 years of age. She had had an injury to the upper part of the left arm 26 years before. Slight swelling had persisted since the accident. She had complained of aching pains in her arm for three years. The upper end of the arm had increased in size during the preceding six months, and had done so more rapidly during the latter three months. The examination showed a tumour of the upper end of the humerus, having the skiagraphic appearances of an endosteal sarcoma, possibly of the myeloid variety. The upper half of the left humerus was excised, and a portion of the left fibula was transplanted into the gap. The head of the bone was wired into the glenoid cavity, and the other end hammered into the lower portion of the humerus. The arm had been taken out of plaster that day. Fairly extensive active and passive movements of the limb could be carried out. The leg from which the portion of the fibula had been removed was unimpaired. The patient had walked for several hours that day. The tumour proved to be a *myxo-chondro sarcoma*.

Dr. Morton also demonstrated a specimen of an adrenal gland, which he had transplanted into the abdominal wall in a case of *Addison's disease*. Considerable improvement has been observed for twelve months. At the end of this time, the patient had suddenly become acutely ill, and had died a month later, all the symptoms of Addison's disease having been well marked. Dr. Morton pointed out that the transplant had undergone changes similar to those found in the adrenal.

Dr. H. B. Devine showed a girl, aged 14, to illustrate the end results of *double arthroplasty for bony ankylosis of temporo-maxillary articulations*, following double parotid abscess. The method was free transplantation of the fascia lata.

He also demonstrated a new method of dealing with a chronic empyema with branching processes. This method consists in the resection of ribs, intercostal muscles and parietal pleura, which constitute the anterior wall of the empyema. The patient had had pneumonia 18 months before, and an empyema had developed subsequently. The usual form of drainage had been carried out, but a large chronic empyema had persisted.

Dr. Devine exhibited a Röntgen plate, showing a *collargol injection of a pyonephrotic kidney*. The patient was a woman aged 24 years. She had not had any previous illnesses. The renal affection had lasted for one week. A tender tumour of the left kidney was discovered. Pus was seen issuing from the right ureter. An aberrent renal artery was found. This was ligatured and divided. The skiagram showed the dilated pelvis and calyces with sharp outline.

Dr. Devine also demonstrated a *kidney rest* for facilitating operations on that organ.

Dr. Julian Smith showed a patient, aged 56 years, who had complained that he had not had a normal action of the bowels for 12 months. There had been frequent desire to defæcate, but he had only been able to pass blood and slime. He had experienced vague abdominal pain after meals. An extensive, freely moveable tumour was felt per rectum. The diagnosis of carcinoma was made. An operation was performed, and a hard stricture of the sigmoid flexure, not connected with the rectal growth, was excised. A complete transverse colostomy was carried out. The lower end of the bowel was closed. Later a second operation was performed, at which the rectum was excised by the abdomino-perineal method. The growth was removed very freely. Eight months after the operation the patient was in good health, and able to work. The tumour was shown to be a *double carcinoma of the rectum and of the sigmoid flexure*. The patient wore an ingenious device over the colostomy opening. This consisted of an aluminium dome, affixed to a belt, and fitted with a pneumatic rubber rim.

Dr. Smith expressed the opinion that rectal cancer situated low down in the pelvis should be attacked by the perineal route. There was a difficulty in controlling hæmorrhage when other methods were employed. The resulting anus was unsatisfactory, as there was no control of the sphincter muscle; stenosis frequently occurred, and the use of a bougee became necessary. Surgeons were adopting the abdomino-perineal attack. He did not favour the completion of the operation at one sitting. He attacked the rectum through a central incision, which allowed of a complete eradication of the disease, and admitted of an examination of the liver for any secondary involvement. In the case shown, he had made a central incision, and found the liver clear; he had intended to do a complete transverse colostomy. He discovered a secondary growth in the loop of the sigmoid. After the complete removal of the affected parts the patient was put to bed to gain strength. A complication was met with in that the lower portion of the bowel went on bleeding. A second operation became necessary. He had thus added a new point in technique by re-opening the abdomen in the mid-line, and attacking the whole disease again from above. The advantage of this method was that everything was under the eye, and could be approached easily. The peritoneum was then drawn over the bowel, and the wall sewn up. This man carried no offensive odour with him, as is generally the case in those having undergone colostomy.

Dr. Julian Smith also showed a case of *calculous pyonephrosis*. The patient, aged 47 years, had had a large branched calculus removed from the kidney five years previously. He had been quite well up to six months before admission. At that time he had had severe pain shooting into the groin. He had been laid up for two days. The attacks had become more frequent. He had had several attacks of hæmaturia, the last one having been brought on by the lifting of a heavy weight.

On examination the speaker found that the kidney was not palpable, and that there was no tenderness. The ureters were catheterized, and the right one was found to be clear, while the left one revealed pus. A skiagram taken showed a group of shadows suggesting stone. He, therefore, proceeded to operate, and found the pelvis of the kidney large and dilated. It was full of pus, and contained 35 small, smooth stones. The ureter was irremediably stenosed and scarred. Nephrectomy was consequently performed.

Dr. Forbes Mackenzie demonstrated a simple method of controlling hæmorrhage from cavities with yielding walls and base, in cases in which a ligature could not be applied to the bleeding points.

He also showed a patient who was suffering from *spasmodic tic*, involving the upper branches of the fifth nerve on the right side, i.e., the supraorbital, the supratrochlear, the malar and the nasal branches. The patient had only one eye, the right one; Dr. Mackenzie could therefore not advise the removal of the Gasserian ganglion.

He also exhibited a case of *lupus* of the wrist and forearm, with extensive formation of tubercles. The patient had been treated by heliotherapy, with marked benefit.

Lastly he described an operation for an *occipital meningo-encephalocele* in an infant. The opening in the dura mater had been closed. A peculiar form of nystagmus was present, and the vision had not developed.

Dr. Alex. Lewis presented a case for diagnosis. The patient was a male, aged 26 years, a boot finisher by trade. He was admitted into hospital on February 7, 1915, on account of blindness of the right eye. The examination of the heart and lungs did not reveal any pathological change. There was no albuminuria or glycosuria. The knee jerks were active and equal, and all other reflexes were active. The plantar reflex was flexor. There was no disturbance of sensation.

The right pupil was dilated and inactive. There was some weakness of the superior, inferior and internal recti on the right side. Grey atrophy of the disc was noted.

There were no retinal or choroidal changes. The vision was entirely lost. The left eye was normal.

The patient had been under observation for 2½ months. Vomiting had occurred at times; headache had never been prominent. The patient slept all day; his memory was bad. There was distinct mental elation, and at times he was very talkative. The Wassermann reaction was negative. Examination by X-rays failed to elicit any postive sign. The sinuses appeared to be healthy.

Dr. Lewers expressed the opinion that there was a *cerebral tumour*; this appeared to be the general view of those members with whom he had spoken. He asked for advice in regard to operative treatment.

Dr. A. V. M. Anderson gave it as his opinion that there was a cerebral tumour. He based this opinion on the presence of headache, optic neuritis, and vomiting. He suggested that the tumour was situated in the frontal region. If the patient did not improve within a short time he would advise an exploratory operation.

Dr. L. S. Latham showed a case of *exophthalmic goître with myasthenia gravis*. The patient, a girl aged 19 years, had had Graves's disease for two years. A partial thyrodectomy had been performed in November, 1914. A few weeks later, weakness of the jaw, neck, eye and certain limb muscles had developed. There was some interference with deglutition and articulation. The weakness was more marked in the evening. In March she was admitted for tetany. The symptoms were dropping forward of the head, wrist drop, frequent regurgitation of fluids through the nose, etc. He demonstrated the limited movements of the eyes by the external recti. The muscles of the face and tongue were markedly impaired in their function. The adductors of the arm participated in the weakness. All the reflexes were uniformly exaggerated. She was taking thyroid gland when admitted, and strange to say, was improving. He had therefore persisted with the medication.

Dr. Latham demonstrated a patient suffering from *pulmonary tuberculosis, treated by artificial pneumothorax*. The patient, a young woman, aged 23 years, had been ill for 4½ years. In March, 1914, the right lung showed extensive involvement, but the disease was apparently inactive. There was active diffuse disease on the left side. He had treated her by giving 11 nitrogen injections. This had resulted in a marked improvement, both from a subjective and from an objective point of view. A skiagram was demonstrated.

Dr. Latham explained that when the patient had come down to the hospital 13 months before, almost in extremis, it was found that the left lung was very greatly affected, and that extensively disease had involved the right lung. The case was by no means suitable for treatment by artificial pneumothorax. One lung should be free from disease. As there were pleural adhesions he hesitated in adopting this course. The patient improved considerably, and observation alone made him feel that the treatment had been beneficial. There was one notable feature. After the tenth injection an effusion developed, the only one in his experience of about 100 cases. This effusion could be detected by X-rays, but he had not been able to withdraw any fluid for pathological examination.

Dr. M'Coll said that his experience of artificial pneumothorax was limited. The difficulty met with was the selection of a suitable case. It could be tried in cases in which the disease was nearly unilateral, especially if recurrent hæmorrhages had occurred. The apparatus he employed was a very inexpensive one, in contradistinction to the elaborate apparatus exhibited by Dr. Latam. Provided that the pleura was thoroughly under the influence of local anæsthesia there was no risk. The manometer attached to the apparatus indicated when the needle had reached the pleural cavity. The needle used by Dr. Latham was finer than those in general use, and there was a stop on it, which could be set at a given distance to guard against perforation of the lung.

Dr. F. A. Newman showed a case of *myasthenia gravis*. He stated that at best the diagnosis must be provisional only. He based his opinion on the fact that fatigue was produced easily. Venereal disease was excluded. The external muscles of the eye were the only ocular muscles affected. Dr. Anderson said that he had seen the patient two months before. It was a difficult case to diagnose. The Wassermann reaction was negative, and there was no other evidence of syphilis. Three years before the patient had had pains in the liver region, followed by jaundice, and later by glycosuria. Two months before no sugar was found in the urine; there was pus, together with a number of non motile bacilli. The weakness was practically confined to the ocular muscles. There was no true myasthenic reaction. It might be wise to investigate the urine once more, and if necessary to treat the patient for the urinary condition.

Dr. A. Norman M'Arthur showed a number of specimens:

1. *Double Uterus* (fibroid), with rudimentary second vagina. —There had been hæmorrhage and dysmenorrhœa. He had diagnosed multiple fibromata, and had proceeded to operation. The structure regarded as a cyst of the vagina proved to be the secondary vagina. There was a double uterus found, with multiple fibromata.

2. *Fibrosis Uteri*.—The patient had been curetted several times for constant hæmorrhage without benefit. The uterus and adnexa were normal in size. The uterus was hard and firm. Dr. M'Arthur said that very little mention was made of fibrosis uteri in latter years. It was a condition which was associated with recurrent hæmorrhages in women of over 24 years, and especially during the climateric. In this case there was no enlargement of the uterus, and no indication of pathological changes. Before the removal of the uterus, a pathological examination of the cervix should be made, and if fibrous tissue was found to involve the uterine wall nothing could do that woman any good but a complete removal of the whole organ. Anything short of a subtotal hysterectomy would probably result in a recurrence.

3. *Fibrosis Uteri with Polypus*.—The patient was an old woman. Her sister had had malignant disease of the uterus, and she feared that she had the same. In spite of the polypus the uterus was not enlarged.

4. *Old cascating tubercular disease of the Fallopian tubes and ovaries*.—There was a history of dysmenorrhœa. The patient had never been pregnant; she was desirous of having children. Dr. M'Arthur curetted the uterus, and carried out a complete examination. The uterus was retroverted and somewhat fixed.

5. *Malignant tumour of the Cervix Uteri associated with pregnancy*.—The patient was 6½ months pregnant. There was bleeding and an offensive discharge. He had to choose between waiting for two or three months before carrying out a Cæsarean section, or operating at once, sacrificing the child, and making an effort to remove the whole of the uterus and all the carcinomatous growth. The latter course was followed.

Dr. Thomas Murphy showed a specimen of *Twin Ectopic Pregnancy*. The patient had missed one period. Fourteen days later she had experienced pain in the lower part of the abdomen, and faintness. During the following fortnight three or four similar attacks occurred. A severe attack, with great pain and marked hæmorrhage took place. The patient was sent to hospital. An operation was performed at once, during the course of which hæmorrhage occurred. A large amount of fluid blood was found in the abdominal cavity, and several old clots. The tube had ruptured; its outer dilated end was adherent to the large bowel. Two fœtuses were found free in abdominal cavity. Both had apparently been extruded at the same time. Dr. M'Arthur assumed that an attempt at tubal abortion with bleeding had first taken place; the dilated end of tube had then become adherent to the bowel, and this had prevented further hæmorrhage. Rupture had then occurred.

Dr. Hewlett exhibited:— (1) Twelve plates showing fracture, gradual growth of tumour, arm graft in place, and the arm after the graft had been removed, in a case of *myeloid sarcoma of the humerus*. The patient had hurt his shoulder throwing a stone 4½ months previously. There was sudden and severe pain referred to the site of the insertion of the deltoid. The pain prevented movement for some time. On the day before admission he again injured the arm, causing severe pain on movement, especially rotation. The shoulder was found to be swollen, and very tender. There was very severe pain on grasping the arm and abducting it. The clavicle was not involved. The head of the humerus was excised, and an attempt made to graft the head of humerus, but this failed.

2. *Myeloid Sarcoma of the Tibia.*—Four plates showing the tumour before and after operation. The patient gave the history of a fall three months before; two months later the knee began to swell. The knee was painful, weak and throbbed occasionally. There was some peri-articular swelling, the skin was reddened and hot. An irregular swelling was seen in the anterior surface of tibia. There was a very tender spot near the tuberosity. An operation was undertaken, the bone opened, and the tumour removed with a sharp spoon. There was very free hæmorrhage. The tumour proved to be a myeloid sarcoma. Recurrence occurred at a later date.

3. *Sarcoma of the Head of the Humerus.*—Three plates were shown. The patient had had a blow on the left shoulder. about 1½ years before. The joint became swollen and painful after a month. The patient was treated at the Melbourne Hospital for two months, when the bone was drilled. An operation was performed at the Homœopathic Hospital eight months before. Dr. Bouton removed the head of the bone. He diagnosed the condition as sarcoma. The shoulder joint was swollen, thickened and hard. The scapula moved when passive movements of the arm were carried out. The swelling extended down the upper third of the humerus.

4. *Sarcoma of the Shoulder.*—The patient complained of pain in the left shoulder, of two months' duration, and loss of weight. The left shoulder region was much swollen and distended; it had been opened, but nothing had been found. The swelling was of bony hardness. The upper level of swelling was on a line wtih the acromion, and the lower level at the anterior axillary fold. Rotatory movement was painful. The patient had a tumour of groin, which proved to be sarcomatous. Interscapulo-thoracic amputation was performed. The patient improved at first, but died suddenly some months later.

5. *Sarcoma of the Humerus.*—The patient had sustained an injury to the upper part of the left arm 20 years before. Some swelling had persisted. There had been pain for three years. The upper end of the arm had increased in size for six months. A tumour was situated at the upper end of the humerus. It had the skiagraphic appearances of an endosteal sarcoma, probably myeloid. The upper half of the left humerus was excised, and part of the fibula was transplanted into the cavity formed. The tumour proved to be a *myxo-chondro-sarcoma.*

Dr. E. Ryan showed a case of *sub-hyaloid haemorrhage*, with normal blood findings. He also showed a case of *blepharoplasty*, performed for acute exophthalmos and conjunctivitis, following thyro-toxicosis. The lids were sewn together, with the exception of a small hole. They remained in this position for eight months.

Dr. J. Newman Morris demonstrated a man, æt. 24, who was suffering from a *perforating ulcer* of the right foot of three years' duration. The knee and ankle jerks were absent on the right side. There was loss of tactile sensibility, of sense of deep pain, and of sense of position of the big toe. Pinpricks were not felt over the lower half of the leg and foot. The temperature sensibility was not altered, and there was no muscle weakness. The knee jerk on the left was exaggerated, and the plantar reflex flexor. No sensory alterations were discovered. The abdominal reflexes on the right side were absent. The pupils were unequal; both reacted to light and accommodation. There was slight haziness of the right cornea. The fundus was not examined. The complexion was pale yellow. A slight secondary anæmia was present. The Wassermann reaction was negative, and the patient denied having contracted a venereal disease, but admitted exposure. The urine contained a small amount of albumin, but no sugar; the Sp. Gr. was 1020. There were no sensory symptoms, no paresthesia, and no ataxia. Romberg's sign was absent. There was occasional incontinence of urine. The patient was constipated. Dr. Morris regarded the condition as a typical *unilateral tabes dorsalis.*

He also showed a case of *osteomyelitis* of the second and third metatarsal bones of the right foot. A fluctuating swelling over the right sacro-iliac joint had existed for nine months; it was painless, and varied in size. There were no other signs of tuberculosis.

Dr. H. Barry Thompson showed a *papilloma of the left supratonsillar fossa.* A swelling had been noticed in July, 1914. It had gradually increased in size. There was no pain, but a certain amount of discomfort on swallowing.

Dr. Thompson also exhibited a case of *chronic ulceration of the nose*, probably *syphilitic* in nature.

Dr. J. M. Baxter demonstrated the effect of *tarsectomy* in a case of a long-standing *trachoma* of both upper lids, together with pannus and corneal infiltration. There was some drooping of the upper lids, due to the extensive thickening of the tarsus. He was placed on the routine treatment adopted for trachoma, but there was comparatively little improvement. He lived in the country, and was anxious to return to his home. A double tarsectomy was performed, and the result has been very satisfactory. Dr. Baxter had performed this operation in more than 70 cases, and in only three were the results unsatisfactory.

Dr. Baxter also showed a case of *hatpin injury to the eye.* The patient had had choroiditis of left eye, probably syphilitic, with complete loss of vision since childhood. While attending market a lady's hatpin had struck her on the right eye. She was seen three days later. The right cornea was more or less completely covered with a greyish-white infiltration and a few blood vessels could be seen converging towards the pupil, but slightly below and outwards. The pupil was widely dilated, as a result of drops used the day before Dr. Baxter had seen her. The anterior chamber was completely collapsed. The eye was irrigated with 1 in 6000 perchloride of mercury. Atropine was used and the eye bandaged. Three days later the anterior chamber had reformed. Useful vision in the right eye was regained.

His third case was one of a patient who had had a *cataract* of right eye. A preliminary iridectomy was done, followed in a month by extraction. No reaction followed, and she left the hospital about the tenth day. Four days later the eye became painful. There was iritis, and the whole of the upper half of the iris was covered by a dense exudation. The tension was + 1. The eye was very inflamed. She was placed under appropriate treatment, but the eye remained in much the same condition for three weeks. Eventually the inflammation subsided, but complete occlusion of the pupil followed. On two occasions iridotomy, with scissors, was performed, but a violent reaction followed. Dr. Baxter then did an iridotomy, using two needles instead of scissors. There was no reaction, and a very good pupil was obtained. The vision, with glasses, had improved to $^{6}/_{18}$.

Dr. Hermann Lawrence showed some dermatological cases of interest:—

1. *Demodex folliculorum.*—There was an impetiginous eruption on the face, ringed; no honeycomb crusts were present. This condition was more resistant to treatment than *impetigo contagiosa.* Painting with iodine was found to be better than applying ointments. Adults were more often affected than children. Numerous specimens of *demodex folliculorum* in scrapings from the spreading edge were met with. In taking specimens for examination, ether must be avoided. Under the microscope the mites or grubs could be seen in their cocoons.

2. *Cylindromes* (Sabourand).—These are usually benign, and only exceptionally malignant. It affected women of middle age (alveolar epithelioma). *Endothelioma capitis* (Pusey), (synonyms, sarcoma cutis, Turbden tumours) were slow-growing tumours, often lasting thirty to forty years (alveolar sarcomata or endotheliomata). Dr. Lawrence showed instances in a mother and daughter, who were similarly affected. The condition had improved under treatment with X-rays. The affection was a peculiar variety of the vaso-cellular epithelioma (Sequeira). A number of explanations had been given for the peculiar cylindrical appearance of the cellular growths in the sections. The stroma formed characteristic transparent cylinders and oval masses, situated between the epithelial cells proper.

3. *Multiple benign cystic epitheliomata* [multiple rodent ulcers, epithelioma adenoides cysticum (Brooke)].—The patient had had some thirty to fifty tumours upon the face, varying in size from that of a pin's head to that of a small bean. The tumours had disappeared under treatment (radio-therapy or freezing) at first.

4. *"White Spots Disease" (Morphoea Guttata).*—This condition was characterized by numerous dense white spots, occurring

especially around the neck and upper portions of the chest and back. Some lesions also were found upon the abdomen and legs. The spots varied in size from that of a pin's head to that of a split pea, and showed little tendency to coalesce. The lesions showed peculiar dense whiteness, sharp outline and absence of definite elevation.

5. *Epithelioma.*—A very extensive growth had been treated four years before with radium. It had healed. The disease had cleared up, and the patient had remained well since. The microscopical examination had been carried out by Dr. Mollison.

A meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on April 30, 1915, Dr. George Armstrong (the President) in the chair.

Dr. A. E. Finckh read a paper on one thousand and twenty-seven Wassermann reaction tests performed during 1914 on patients of the Sydney Hospital; a discussion on the value of the test. He pointed out that with the possible exception of the determination of the opsonic index, the Wassermann reaction was the most complicated test in use at the present time. The complication arose not so much from the carrying out of the test as from the varied assortment of the ingredients necessary. It required a thorough organization to render a laboratory fit to carry out this test on a large scale. The facilities required had been attained at the Sydney Hospital some five years since, and they were able to perform the test in an unlimited number. All patients suspected of syphilis were submitted to the test, irrespective of the date of infection.

Dr. Finckh emphasized the fact that they were employing the original technique of Wassermann. The antigen used was an extract of liver of a syphilitic infant. He preferred this because he had determined experimentally that it gave a slightly larger percentage of positive reactions than an extract of normal guinea-pig's organ. The difference was about 2%. He then turned his attention on to the specificity of the reaction. Wassermann had based his researches on the work of Bordet and Gengou, who had demonstrated the presence of antigen or antibody by means of the complement fixation method. Complement fixation implied the union of antigen, or substance capable of producing an antibody, and its specific antibody (amboceptor) in the presence of complement. Complement was present in every normal serum. Without complement no union between antigen and antibody was possible. Complement deviation, which was a term used for the same test, implied the deflection of complement from a hæmolytic system by the antigen-antibody. If the complement had already become fixed by the antigen-antibody, the hæmolytic amboceptor and the red cell would not find complement to complete the hæmolysis. The theory that the Wassermann test depended on this form of specific deflection of complement by an antigen with its specific amboceptor was held until it was shown that the extract of syphilitic tissue employed for the purpose of making an antigen could be replaced by normal tissue extracts. It thus became evident that antigen in the true sense of the word did not produce the reaction. In spite of the fact that the test was biologically non-specific, all observers agreed that it was practically specific for syphilis in so far as the diagnosis was concerned.

In discussing the results of the tests carried out at the Sydney Hospital, he pointed out that the test was carried out in every case for diagnostic purposes on persons who were suspected of syphilis. The reactions were read, as was the practice in the Wassermann laboratory, in three degrees only, *viz.*, complete inhibition of hæmolysis; secondly, complete lysis; and, thirdly, incomplete hæmolysis. The first meant syphilis; the second was a negative result to which he returned later. The third result had to be considered carefully, in conjunction with the history of the case. In a case of known infection, it should be regarded as a positive result. The same applied in the instance of grave risk to a syphilitic infection, as in the case of a woman whose husband had syphilis. In other instances, incomplete lysis should be regarded as a negative result of the test. Quantitative estimations were not carried out in the laboratory. They were fallacious, save where a large staff was specially trained to this class of work.

It was useless to attempt to give statistics of the results obtained in the hospital, because so many of the patients, whose serum had given a negative reaction, had disappeared. It would be obviously unfair to the reaction to record these cases as definitely negative. The test should not be relied on, especially in hospital cases, in early primary syphilis. Only 20% to 30% of the cases at the Sydney Hospital in the primary stage gave a positive reaction. The patients were sent to the laboratory before a reaction would be likely to occur. A negative Wassermann reaction was of no diagnostic value within the first six to ten weeks, *i.e.*, to within two or three weeks of the secondary stage. In this stage, it was better to spend time in hunting for spirochætes. These could be discovered in nearly 100%, provided that no antiseptic had been used immediately before. Antiseptics caused the spirochætes to disappear from the surface for some reason or other. In order to render the diagnosis of value, it was essential that nothing but plain water should be applied locally for 48 hours before a microscopical examination was carried out. On the other hand, the reaction was positive in from 99% to 100% during the secondary stage. When the rash was present, the Wassermann reaction was always positive. It was, however, necessary to see that the patients had not been energetically treated, even in this stage, before the test was employed for diagnostic purposes. In tertiary syphilis, the difficulties were considerably greater. It was quite common to test patients with nerve lesions on the assumption that they might be syphilitic. It must, however, be remembered that the majority of patients in the tertiary stage had undergone a more or less energetic treatment at one time or another. In treated cases of nerve symptoms depending on syphilis, the Wassermann reaction was negative in about 30%, while in untreated cases a positive reaction was obtained in from 90% to 95%.

From these results, he was very definitely of opinion that the reaction was specific as far as the practical diagnosis was concerned. A positive reaction was obtained in certain other protozoal infections, such as malaria, frambœsia, etc., but these were easy to distinguish from syphilis. He instanced the doubtful cases of swelling of the testes, in which it could be determined whether the causation was syphilis by the result of the reaction, provided that an energetic treatment had not preceded it. In the same manner, the part played by syphilis in cases of perforation of the palate could be determined by the test. Some very remarkable results had been met with in cases of women with indefinite and persistent pains in the head and back. In interstitial keratitis the reaction was the only means of arriving at a diagnosis of the cause. After referring to obscure swellings of bones, and cases in which the syphilitic infection had occurred twenty or more years before, he made a few remarks on the reaction in tabes. This was disappointing. The majority of the patients had been treated by antisyphilitic remedies, and for this reason a large number gave a negative reaction. His experience showed that at least 25% to 30% gave a negative result.

In connexion with the test, the effect of salvarsan injections had to be taken into consideration. He had formed the opinion as a result of his observations, that it was useless to give less than six injections. The patient should have his injections, and after an interval of six months, should be tested by the Wassermann reaction. If the reaction was still negative, a cure might be assumed, but should the test prove positive, further injections should be given. In regard to the cerebro-spinal fluid, he was not in favour of carrying out the test with this as a rule. The test was never positive in the cerebro-spinal fluid and negative in the serum. He had carried it out in a series of cases in the hospital, and had only obtained a positive reaction once.

Many pathologists carried out the test on the second day after a provocative injection of salvarsan. In his experience, it was much more expedient to carry it out on the twelfth day.

In the discussion, Dr. Chenhall raised the question whether six injections of salvarsan were actually necessary to effect a cure. His experience was not large, but he had known

the Wassermann reaction to remain negative after three injections. He would have liked to have learned from Dr. Finckh as to the value of the test in congenital syphilis. Did the same rules apply as in the case of adults with acquired syphilis? In referring to women with persistent pains in the head and back, the relationship to syphilis was not certain. He enquired whether Dr. Finckh considered that the Wassermann test should be applied in these cases, and if so, how he would justify it to the patient?

Dr. Mills indulged in friendly but severe criticism of Dr. Finckh's results and deductions. He called attention to the crass discrepancies between the Sydney Hospital results and the results obtained everywhere else in regard to primary syphilis. "Surely," he said, "we must expect a positive reaction very early if any reliance is to be placed in the reaction at all." He recalled the fact that Mackintosh had proved quite conclusively in his articles in *Brain* (1913 and 1915), and Orr had confirmed his findings, that spirochætal infections affecting the nervous system spread through the lymphatics. The organisms themselves or their poisons were found in the nervous system within a few hours of infection. He raised the question whether it could be explained why the Wassermann reaction was delayed, if the dissemination was so rapid, as these experiments demonstrated. He wished to confine his attention for a few moments to syphilis of the nervous system. Dr. Finckh had said that in only one instance had the reaction been positive when he had used the cerebro-spinal fluid. His explanations for this were either that all the other patients were not suffering from syphilis, or else there was something wrong with the technique. Head, in his work on "Syphilis of the Nervous System," in referring to the cerebro-spinal fluid, had met with a positive reaction in nearly every case. In view of this fact, which had been amply corroborated, Dr. Finckh's statement appeared to him to be most extraordinary.

At the last International Congress of Medicine it had been suggested that the distinction between primary, secondary and tertiary syphilis should be relinquished, and, instead of this classification, a distinction between parenchymatous syphilis and meningo-vascular syphilis should be recognized. Head had suggested that syphilis should be divided into central syphilis, to include conditions such as tabes, paralytic dementia, etc., and meningo-vascular syphilis. It had been shown that the Wassermann reaction was different in these two groups, if applied to the cerebro-spinal fluid. In central syphilis, it was always positive, but remained positive in spite of all treatment, while in meningo-vascular syphilis, it became negative as the treatment effected an improvement. The value of the test in differentiating between these two groups, from a prognostic point of view, was most marked. The possible explanation of this was that the spirochætes became enclosed within the brain in central syphilis, and neither they nor their poisons reached the general circulation. It was striking that in syphilitic endarteritis, intravenous injections of salvarsan nearly always effected a marked improvement or cure. In central syphilis, this was not the case. It had been demonstrated that salvarsan injected intramuscularly neither reached the brain nor the cerebro-spinal fluid. It had been shown that in death following intravenous application of salvarsan, not a trace of arsenic was found in the brain. If the salvarsan were injected into the spinal theca, it attacked the brain and killed rapidly. It was thus evident that salvarsan was not the great sterilizing agent Ehrlich believed it to be when he first introduced it. The same limitations were met with as in the case of other remedies of value. The remedy did not reach the very places we would like it to reach.

From a practical point of view, it was of high importance to distinguish between dementia paralytica and syphilitic encephalitis. The symptoms were so alike, that the patients would all be sent to the asylum, doomed to die. In the latter condition, the Wassermann reaction could be changed from a positive into a negative one by treatment, while in the former this was not so. In discussing the rationale of this phenomena, Dr. Mills emphasized the wisdom of referring to the essence of the reaction as Wassermann bodies rather than antibodies.

He was in disagreement with Dr. Finckh in regard to the value of quantitative estimations in the reaction. He thought that it was of marked importance to know whether a previously positive reaction became less positive under treatment. If it did, there appeared to be hope that it might become negative under more energetic treatment. In conclusion, he again referred to the valuable work of Mackintosh, who had shown how delicate the reaction really was, and stated that he inclined to the opinion that when a negative reaction was obtained in a case of supposed syphilis, a revision of the diagnosis was necessary.

Dr. Corlette took up the cudgels for Dr. Finckh. He had made the experience that in primary syphilis the reaction was often negative at the time when the patients entered hospital. At a later date, the reaction became positive. For this reason he relied on the finding of spirochætes for the diagnosis of early infections. He instanced a case of a soft sore, in which the spirochætes were found six days after connexion. In this case there was a double infection. He always carried out five or six injections of salvarsan in primary syphilis, and then sent his patient, after the lapse of six months, to have his serum tested. In the secondary stage, the patient should have at least six injections. Three days after the last, the Wassermann test should be carried out, and the subsequent treatment should depend on the result. After referring to the cases of swelling of the testes, which were not always syphilitic, he stated that he agreed with Dr. Mills that it was time to revise the diagnosis if the Wassermann reaction was negative. In many instances of swelling of the epididymis, the diagnosis of syphilis was unfounded. He used to regard all cases of hydrocele with a large epididymis as syphilitic, but since he had used the Wassermann reaction he was not so convinced of the truth of this.

He suggested that systematic statistical records should be kept at the hospital to determine the frequency of syphilis in the community. He thought that if all patients admitted for hernia, and perhaps for certain other non-syphilitic affections, were tested as a routine, some very valuable information could be collected within two or three years.

Dr. Burton Bradley considered that Dr. Finckh was somewhat sanguine in regard to the specifity of the reaction. Since it had been shown that the reaction did not depend on an antigen-antibody combination, it must be regarded as the best instance on record of a scientific fluke. No one had the faintest idea of the nature of the reaction. The only suggestion made in regard to its essence worthy of consideration was that it was in some way mixed up with the mysterious bodies called lipoids. He had given up using quantitative tests. It was extremely daring to base a diagnosis of syphilis on a positive Wassermann reaction alone. He had seen cases in which there were no signs of syphilis and no history of the disease, and yet the Wassermann reaction was positive. It was not always possible to say whether a reaction was positive or negative. He referred also to the condition known as granuloma pudendi, in which Cleland had claimed to have found a spirochæte. He, the speaker, had obtained a positive Wassermann reaction. The lesions were consistent with syphilis, and yet they were also consistent with other granular conditions. Dr. Bradley suggested that pathologists should not attempt to supply clinicians with a definite diagnosis from the reaction, but should limit their reports to a record of fact, whether hæmolysis was completely inhibited, partially inhibited or unaffected. In referring to the delicacy of the reaction, he spoke of Mackenzie's, Muir's and Henderson Smith's work in this respect, and laid stress on the significance of even slight variations in the reagents employed. In conclusion, he expressed the opinion that mercury did not obsruct the reaction, and that provocative injections of salvarsan were of considerable clinical value.

Dr. Finckh replied to the various speakers. To Dr. Chenhall he said that if no other pathological explanation could be found for the pains in the head and back of women, it was essential to consider syphilis. In these cases, the patient should be told it was necessary to examine the blood, and no further difficulty would present itself. To Dr. Mills' remarks he took up a somewhat vascillating attitude. He had little to add to what Dr. Corlette had said in regard to the reaction in early primary syphilis. It was a fact that the cases seen by him at the Sydney Hospital

frequently had a negative reaction until within two or three weeks of the rash period. It was often positive at an early stage, but early treatment might obscure the reaction, and it might not develop at first from other reasons. In regard to the cerebro-spinal fluid, all he had intended to convey was that it was not necessary for the purpose of making a diagnosis of syphilis to subject patients to the discomfort and expense of a spinal puncture.

Dr. Mills interposed with the remark that he had emphasized the prognostic importance of testing the cerebro-spinal fluid, in distinguishing between central and meningo-vascular syphilis.

To this, Dr. Finckh replied that he agreed, but that he had not referred to that aspect of the test. He was glad that Dr. Bradley had supported him in his opinion that the test was too delicate to be used quantitatively in the working laboratory of a hospital. To Dr. Corlette he pointed out that it was doubtful whether a systematic statistical research would be worth while carrying out. Several thousand tests would have to be done, if the results were to be of value, and this would take too long. In his reply to Dr. Bradley, he considered it essential that the pathologist should tell the practitioner something definite. It was necessary that the pathologist should express an opinion as to the diagnosis.

Dr. W. T. Chenhall gave a summary of an article on "Some Views of Modern Gynæcology," the text of which appears on page 428 of this issue.

Dr. Crawford Robertson took up a few points, in spite of the difficulty of discussing so large a paper at a late hour. In regard to what Dr. Chenhall has said of the wreckage of life of women, he raised the question whether anything could be done. Human nature was very strong. It was, in his opinion, impossible to persuade young people to marry early. The only alternative was to teach young men what they could do prophylactically to avoid infections. He thought that this would help more than night clinics. In regard to corsets, he wished to suggest to Dr. Chenhall that nowadays women wore long-fronted corsets, which, if not too tight and if extending well down over the pubes, were rather beneficial than otherwise. It was quite essential that in dealing with this subject of dress men should consider the figure of the woman, and not ask her to dress in an unbecoming manner. Dr. Chenhall had spoken of the transplantation of the ovaries in a highly interesting case. But he was doubtful whether the transplanted organ would last long in its new situation. He believed that it would be absorbed very soon.

Dr. Mills attacked the problem of enteroptosis and the weakening of the abdominal muscles. He called attention to the general belief that rickets was uncommon in Australia. In his experience, mild rickets was extremely common. One of the symptoms of rickets was a protuberant abdomen. This was due in part to the loss of tone of the intestinal muscle, and in part to a loss of tone of the abdominal muscles. If this was not uncommon, then it was scarcely fair to ascribe the prominent abdomen and the enteroptosis to corsets. He thought that it was quite common to see girls with displaced hips and scoliosis. These conditions were grafted on a rachitic basis. The weakness of the abdomen developed in the pre-corset era. He called attention to the fact that if Dr. Chenhall wanted the girls to marry young, it was quite essential that they should be attractive to men. If corsets were denied them, he doubted whether many of them would get men willing to become their husbands.

Dr. Mills also dealt with the question of the wreckage of life. He agreed with Dr. Crawford Robertson that preventive measures were the only practical means of attacking the problem. It was as old as the world, and no advance had been made. Young women did not want to marry until they had enjoyed some freedom. The subject of the internal secretions was so large and still so surrounded with mystery that it was better left alone.

Dr. George Armstrong thought that women and their mothers might do much by education. Marriage at times had a bad effect. Many women agreed to be married, but objected to carry out their part of the contract. They refused to have children. The husband often thought that as his wife was unwilling to fulfill her part, he was justified in taking his freedom. In regard to the question of the damage done by the destruction of unborn life, he had experienced very many sad instances. Women had deliberately sought the abortionist, and after a time were physically wrecked. They then came for help, as they wanted to have children, but nothing could be done for them.

Turning to the question of the abdominal muscles, he was inclined to agree with Drs. Robertson and Mills that exercise was of the first importance in maintaining the tone of the muscles. He pointed out that training led to the development of fine abdominal muscles in athletic men. In women, too, previous training enabled them to get up after a confinement with good muscles. He kept his patient away from her work if possible for six weeks. It was his practice to see the patient after five or six weeks and to satisfy himself that the uterus was as it ought to be. It was futile in many cases to attempt an immediate repair of a lacerated cervix, unless the laceration was very extensive.

Dr. Chenhall replied briefly.

MEDICO-POLITICAL.

A meeting of the Council of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on April 28, 1915, Dr. Honman (the President) in the chair.

Drs. Fay Maclure and W. Kent Hughes tendered their resignations as members of the Council, on the ground that they were leaving the State on service with the 3rd Australian Hospital. The consideration of these resignations were deferred to the next meeting of the Council.

It was announced that the Commissioner of the State Accident Insurance Company had agreed to the increase of fees payable to certifying medical officers under the Workers' Compensation Act, with the exception of those connected with the aged and infirm. The new regulations had been drawn up, and would be submitted to the Governor for signature.

The Council considered a proposal of the Committee of the Dunolly Hospital to provide wards for private patients. The patients would be required to pay an inclusive fee for medical attendance, nursing and medicines. A letter had been addressed by the Council to Dr. W. A. H. Barrett, of Dunolly, re-affirming the principles set forth in connexion with the Yarram Hospital. It was, however, pointed out that, in the absence of a private hospital in the district, the admission into the public hospital of private paying patients would not be objected to, but that no inclusive fee for medical and nursing attendance should be agreed to. Members should insist on their rights of making arrangements with their own private patients. The Council also expressed the opinion that members should have the right of refusing to treat in the public wards patients who were in a position to pay for medical attendance. Every practitioner in the district should be allowed to send a private patient into the paying wards, and to carry out the treatment. The payment for these services would be arranged privately by the practitioner and the patient.

A sub-committee was appointed to draw up a scheme for the better provision of medical books of reference at the various libraries in Victoria. It had been brought to the notice of the Council that there was considerable overlapping in the Public Library and in the Libraries of the University and Medical Society.

The Ethical Sub-Committee reported that, according to Rule 25 of the Victorian Branch, the voting on any question of change of rule or policy, which had been submitted to a general meeting by the Council, was informative only, and not executive. The rule reads as follows:—

> 25. Subject to the regulations of the Association, any Rule or Rules may be rescinded or altered by a majority of members present at a special meeting of the Branch duly summoned to consider a proposed alteration of such Rules, notice of the proposal to rescind or alter having been given by a member to the Secretary in writing, and placed before the Council at a meeting held at least one month previously. The Council may at any time refer any question of change of Rule or any question of policy to the ordinary members of the Branch resident in Victoria for an expression of opinion.

The voting in any such referendum may be by ballot or otherwise as the Council may determine, and at least one week shall be allowed for the return of voting papers. Unless specially provided otherwise in the by-laws, the voting in such referendum shall be informative, and not executive.

In connexion with the regulations for advertisements, discussed at the special meeting held on April 7, 1915, the members had no power to make amendments. The sub-committee proposed that Section 2 of the paragraph, dealing with the "Distribution of Testimonials" (see *The Medical Journal of Australia*, April 24, 1915, p. 389) should read as follows:—

No member shall issue or distribute any testimonials, cards, circulars, or handbills, indicating that he is an applicant for appointment to any position as member of the honorary staff or as Medical Officer, whether honorary or salaried, of a Public Hospital or other Charitable Institution, or as Medical Officer of a Friendly Society or a Miners' Lodge or other similar position, or for appointment to any medical office in the Public Service of the Commonwealth of a State; Provided that testimonials may be sent to the member of any Board with whom the appointment actually rests.

The Council accepted this amendment.

Dr. Anderson gave notice that he would move at the next meeting of the Council that the question of application for appointment as medical officers to lodges by newcomers to a district be considered.

Colonel Fetherston reported that 30 medical practitioners would leave Victoria in a short time for the front, and that 18 were going from New South and 8 from Queensland.

The Council resolved to give a farewell dinner to the whole contingent on May 17, 1915, and a sub-committee was appointed to carry out the arrangements.

A letter from the Secretary of the Geelong Division was read, containing the wording of a resolution dealing with the question of alcohol and the war. The text of the resolution will be found in last week's issue, page 418. It was resolved that some expression of opinion of the Council should be made public, and steps to this end were taken.

The following were elected members of the Branch:—

Dr. Eric Gordon Glassford, Alfred Hospital, Prahran.
Dr. Eric John Kerr, Melbourne Hospital.
Dr. Keith Russell Moore, Alfred Hospital, Prahran.
Dr. Stanley Wilson Shields, Alfred Hospital, Prahran.
Dr. Percy Newall Whitehead, Alfred Hospital, Prahran.

At a meeting of the Council of the Victorian Branch, held on March 31, 1915, Dr. Leslie Henderson attended from the Border Division for the purpose of bringing to their notice the desirability of re-opening negotiations with the Friendly Society Lodges in the district. He pointed out that some of the members were of opinion that the delay in the negotiations was regarded by the Lodges as evidence of weakness on the part of the Victorian Branch of the British Medical Association. He asked the Council to resume the negotiations with a view of arriving at an agreement, even if the provisions of the Common Form of Agreement were not rendered effective at present. The President explained that the negotiations had been suspended during the currency of the war, and the Council had agreed to a continuation of the present conditions of Lodge practice until the matter was again discussed. Under these conditions, public opinion would be arrayed against the medical profession if any attempt were made to force negotiations on any of the Friendly Societies. Dr. Henderson thanked the Council for the information, and stated that he felt sure that the members of his Division would be satisfied that nothing could be done at present in the matter.

The following have been nominated for election to the New South Wales Branch:—

Dr. F. Challands, Mudgee.
Dr. Norman Zions, Paddington.
Dr. Donald McRae, Geurie.

The following is a list of additional subscriptions received during the week ended May 1, 1915, for the Belgian Patriotic Fund, by the Queensland Branch:—

	£	s.	d.
Dr. Bateman, Selwyn (April contribution)	1	0	6
Dr. E. E. Bourne, Brisbane (May contribution)	0	10	0
Dr. Douglas, Brisbane (April contribution)	1	1	0
Dr. Humphrey, Townsville (April, May and June contribution)	1	1	0
Dr. McKenna, Brisbane (April contribution)	1	0	0
Dr. Robertson, Brisbane (April contribution)	4	0	0
Dr. Roe, Augathella (April contribution)	0	10	0
Dr. Turner, Brisbane (April and May contribution)	4	4	0

BELGIAN DOCTORS' RELIEF FUND.

New South Wales.

During the week ending May 4, 1915, 14 subscriptions have been received by the Council of the New South Wales Branch toward the Belgian Doctors' Relief Fund. The names of the subscribers are as follows:—

		£	s.	d.
	Amount previously acknowledged	414	4	0
Dr.	Allan, George, Summer Hill	2	2	0
„	Armstrong, George, Sydney	3	3	0
„	Anderson, H., Cootamundra	3	3	0
„	Blackburn, C. B., Sydney	5	5	0
„	Curtin, A., Grenfell	1	1	0
„	Gibson, D. D., Mullumbimby	1	1	0
„	Harris, M. H., Moree	2	2	0
„	Hughes, L. H., Chatswood	1	1	0
„	Maitland, Sir Herbert, Sydney	5	5	0
„	Mills, A. E., Sydney	2	2	0
	New South Wales Medical Benevolent Fund	50	0	0
„	Quilter, J., Moruya	1	1	0
„	Smith, P. E. W., Sydney	1	1	0
„	Taylor, G. H., Sydney	1	1	0
	Total	£493	12	0

South Australia.

We have been asked to intimate to the gentlemen whose names appear in the appended list, as well as to those whose names were printed last week, that the Treasurer of the South Australian Branch desires to acknowledge with grateful thanks their various subscriptions to the Belgian Doctors' Relief Fund. Up to April 26, 1915, 66 subscriptions had been received. There are 239 names on the list of members of the Branch, and it speaks well for the generosity and promptness that, within a fortnight of the issuing of the appeal, nearly 28% of the members had responded. £250 has already been forwarded to London.

		£	s.	d.
	Amount previously acknowledged	103	6	6
Dr.	Aitken	10	10	0
„	Benham	1	1	0
„	Bennett, A. H.	3	3	0
„	Bickle	*2	12	6
„	Birks, Melville	†2	0	0
„	Bonnin	3	3	0
„	Borthwick, E. L.	3	3	0
„	Borthwick, F. H.	10	0	0
„	Borthwick, T.	5	5	0
„	Brown, Gilbert	1	1	0
„	Brummitt, Douglas	3	3	0
„	Brummitt, Elliott	3	3	0
„	Brummitt, R.	*3	13	6
„	Burnard, R.	3	3	0
„	Chapple, Phœbe	2	2	0
„	Cherry	1	1	0
„	Cooper, C. T.	5	5	0
„	Cormack, W. P.	0	10	6
„	Dawson, Dean	‡3	3	0
„	Downey	2	2	0
„	Drummond and Dr. Burston	*2	2	0
„	Gilbert	*5	10	6
„	Giles	5	5	0
„	Good, J. Ernest	5	5	0
„	Goode, Arthur	5	0	0
„	Gregerson	2	2	0
„	Harrold	3	3	0

		£	s.	d.
	Carried forward	200	18	6
Dr.	Hayward, W. T.	5	5	0
„	Leon	1	1	0
„	Lewis, Eric	2	2	0
„	Lynch	*3	13	6
„	von Lukowitz	3	3	0
„	Margarey, Cromwell	†3	3	0
„	Mayo, Helen	3	3	0
„	Morgan	5	10	6
„	Muirhead, L. G.	1	1	0
„	Nairne	0	10	6
„	Niesche	*2	12	6
„	Parkhouse	2	2	0
„	Pellew	3	3	0
„	Poulton	5	5	0
„	Powell, Harold	2	2	0
„	Proctor	2	2	0
„	Pulleine	5	5	0
„	Rischbieth	5	0	0
„	Rogers	3	3	0
„	Sangster, J. I.	†0	10	6
„	Stirling, Professor	*5	10	6
„	Thomas, E. B.	1	1	0
„	Verco, Sydney	*2	12	6
„	Wilcox	3	3	0
„	Yeatman, J. W.	1	0	0
	Total	£274	3	0

* Including 10s. 6d. in lieu of annual dinner subscription.
† Each month.
‡ In addition, £1 monthly.
¶ In addition, 10s. monthly.

Our attention has been called to an error in the list published last week (p. 419) under the head "Belgian Doctors' Relief Fund, New South Wales Branch." The contribution standing under the name of Dr. Lennox Teece should have been entered as from the members of the Resident Medical Staff of the Royal Prince Alfred Hospital, collected by Dr. Teece.

Medical Societies.

(Affiliated with the British Medical Association.)

NORTHERN SUBURBS MEDICAL ASSOCIATION.

The annual meeting of the Northern Suburbs Medical Association was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on April 17, 1915, Dr. F. Guy Griffith, the President, in the chair.

Dr. L. Halse Rogers, of Ryde, was elected a member.

The report of the Committee was presented by the Honorary Secretary, Dr. E. A. R. Bligh. The report was adopted. The Honorary Treasurer's report was also adopted.

Dr. F. Guy Griffith delivered the Presidential address (see *The Medical Journal of Australia*, May 1, 1915, p. 405).

It was resolved that Mr. Barr Brown be invited to accept the position of Honorary Organizer.

The following were elected office-bearers and members of the Committee for the ensuing year:—

President: Dr. W. G. C. Smith.
Vice-President: Dr. L. Watson Harvey.
Honorary Secretary: Dr. E. A. R. Bligh.
Honorary Treasurer: Dr. E. M. Humphrey.
Members of Committee: Drs. F. Guy Griffiths, Clarence Read, J. L. T. Isbister, F. S. Tange, D. Kelly, W. B. Dight, H. Z. Throsby, and F. M. Blackwood.
Representative to the Council of the Branch: Dr. E. A. R. Bligh.
Delegate: Dr. E. A. R. Bligh.
Honorary Auditor: Dr. H. Selwyn Capper.

Public Health.

HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health of New South Wales for the fortnight ending April 26, 1915:—

Disease.	Metropolitan Combined District. Cs.	Dths.	Hunter River Combined District. Cs.	Dths.	Remainder of State. Cs.	Dths.	Total. Cs.	Dths.
Enteric Fever ..	45	1	8	—	60	7	113	8
Scarlatina	231	—	36	—	134	—	401	—
Diphtheria	120	7	12	1	185	8	317	16
Inf'ntile Paralysis	—	—	—	—	2	—	2	—
Malaria	4	—	—	—	—	—	4	—

The number of cases of enteric fever was higher than that in the preceding fortnight, while the number of deaths was lower by one. Scarlatina and diphtheria were also more prevalent than during the preceding fortnight. The distribution of the cases was as follows. Enteric fever: Botany, 12 cases; Broken Hill, 8 cases; Sydney, 6 cases; Paddington and Redfern, 5 each; and Forbes 4 cases. Scarlet fever: Sydney, 23 cases; Newtown, 18 cases; Marrickville, 15 cases; Balmain, 14 cases; Canterbury and Willoughby, 11 cases each, and in certain other metropolitan districts less than 10 cases each. In the country districts there were 10 cases at Bulli Shire and Goulburn, 9 at Mudgee, 8 at Broken Hill, 7 at Cessnock, Forbes and Wollongong, and less than 7 at the other districts. Diphtheria: Broken Hill heads the list with 36 cases; Sydney comes next with 20 cases; Goulburn shows 18 cases; and a number of other districts had 9 or fewer cases. Malaria: The 4 cases notified were all within the metropolitan district. During the fortnight preceding there were 16 cases notified, so that 20 cases have been notified in New South Wales during one month.

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health of Victoria for the week ended April 29, 1915:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Totals. Cs.	Dths.
Diphtheria	42	4	87	2	129	6
Scarlatina	10	0	15	0	25	0
Enteric Fever ..	1	1	12	1	13	2
Pulmonary Tuberculosis	16	9	6	0	22	9

HEALTH OF QUEENSLAND.

The following notifications have been received by the Department of Public Health of Queensland during the week ending April 24, 1915:—

Disease.	No. of Cases notified.
Enteric Fever	19
Diphtheria	44
Erysipelas	3
Pulmonary Tuberculosis	7
Scarlatina	12
Puerperal Fever	1
Total	86

Obituary.

JOSEPH LEATHOM WASSELL.

Dr. Joseph Leathom Wassell, who died of septic poisoning at Thursday Island on April 7, 1915, at the age of 41, was born at Brisbane and educated at the Brisbane Grammar School. He was a student at the University of Sydney, where he graduated in 1897 with a high place in the final lists. He became resident surgeon for some two years at the Royal Prince Alfred Hospital, acted for a short time as Superintendent, and was subsequently Superintendent at the Children's Hospital, Glebe. He afterwards travelled to Japan and the East, and after his return acted as Assistant Government Medical Officer at Brisbane during a plague outbreak. About 1902 he began practice at Thursday Island, where he remained up to the time of his death, except for occasional visits to the East and to the southern centres. He held the positions of Quarantine Officer, Government Medical Officer, Medical Officer of Health, and Surgeon Superintendent of the General Hospital, and was a Captain in the Australian Army Medical Corps.

He leaves a widow and two children.

One who knew him well writes:—"It is hard to realize that Wassell is no longer with us. He was a man of the

best type, upright in character, strong of will, and kindly of heart, concealing beneath a somewhat taciturn manner a fund of dry humour and the eternally youthful spirit of a true sportsman. His professional abilities were of a high order, and would have earned him recognition anywhere, but he preferred the strange and diverse community of "The Straits" to the larger centres of men. In his youth he won distinction as an oarsman, a footballer, and a rifle shot, and in later life he became known as a crack shot amongst a community of good riflemen. He brought to his professional work the same qualities of unflagging interest and good-tempered determination to do the best that lay in him. His death has left a blank in the life of the Torres Straits community which can never be filled. The funeral was attended not only by all classes on Thursday Island, but by many natives from far off islets, who came long distances by boat to pay the last honours to one whom they all loved and respected." '

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xiii.

Medical Journal of Australia, Assistant (part-time).

Births, Marriages, and Deaths.

The charge for inserting advertisements of Births, Marriages and Deaths is 5s., which sum should be forwarded in money orders or stamps with the notice, not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

BIRTH.

LIPSCOMB.—On April 24, 1915, at Leichhardt, Sydney, the wife of T. W. Lipscomb—a daughter.

Proceedings of the Australasian Medical Boards.

NEW ZEALAND.

The following have been registered under the provisions of "The Medical Practitioners' Act, 1914," as duly qualified medical practitioners:—

Wilfred Stanley Wallis, M.B., B.S., N.Z., 1915.
Gordon Napier MacDiarmid, M.B., B.S., N.Z., 1915.
Douglas Gordon MacPherson, M.B., B.S., N.Z., 1915.
Roland Arthur Hertslet Fulton, M.B., B.S., N.Z., 1915.

The following have been given provisional practising certificates, pending the conferring of the degrees by the University of New Zealand:—

Noel Stewart Whitton, M.B., B.S., N.Z., 1915.
John Graham Gow, M.B., B.S., N.Z., 1915.
Donald Mackay, M.B., B.S., N.Z., 1915.
Henry Baldwin Ewen, M.B., B.S., N.Z., 1915.

Books Received.

SMALL-POX EPIDEMIC IN NEW SOUTH WALES, by D. G. Robertson, M.D., D.P.H., Chief Quarantine Officer for Victoria, 1915. Issued under the authority of the Minister for Trade and Customs. Melbourne: Royal 8vo., pp. 29, with diagrams and 40 plates.

TEXT-BOOK OF PUBLIC HEALTH (late Husband's), by E. W. Hope, M.D., D.Sc., Professor of Public Health, University of Liverpool, etc., etc., Eighth Edition, revised and enlarged, 1915. Edinburgh: E. & S. Livingstone; Demy 8vo., pp. 267; illustrated. Price, 5s. net.

A TEXT-BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY, by John Glaister, M.D., D.P.H., F.R.S.E., Professor of Forensic Medicine and Public Health in the University of Glasgow, etc.; Third Edition, 1915. Edinburgh: E. & S. Livingstone; Demy 8vo., pp. 857, with 137 illustrations and one coloured plate. Price, 15s. net.

ART OF PRACTICE; Issued by the Post Graduate Society, undated. London; Demy 8vo., pp. 118.

THERAPEUTIC NOTES; Issued by the Post Graduate Society, undated. London: Demy 8vo., pp. 216.

Diary for the Month.

May 11.—Tas. Branch, B.M.A., Monthly and Council.
May 12.—Melbourne Pædiatric Society.
May 13.—Vic. Branch, B.M.A., Council.
May 14.—S. Aus. Branch, B.M.A. Council.
May 14.—N.S.W. Branch, B.M.A., Clinical Evening.
May 18.—N.S.W. Branch, B.M.A., Executive and Finance Committee, Ethics Committee.
May 19.—W. Aus. Branch, B.M.A., Monthly.
May 19.—Vic. Branch, B.M.A., Clinical Meeting.
May 19.—W. Suburbs Med. Association, Clinical Evening.
May 20.—North-Eastern Medical Association (Bangalow, N.S.W.).
May 21.—Q. Branch, B.M.A., Council.
May 25.—Vic. Branch, B.M.A., Eye and Ear Section.
May 25.—N.S.W. Branch, B.M.A., Organization and Science Committee, Medical Politics Committee.
May 26.—Vic. Branch, B.M.A., Council.
May 27.—S. Aus. Branch, B.M.A., Monthly.
May 28.—N.S.W. Branch, B.M.A., Ordinary.
May 29.—Melbourne Hospital Clinical Society.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute. F.S. Lodges at Longreach.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A.
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Canterbury United F.S. Dispensary. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, and Auburn. F.S. Lodges at Wellington. Killingworth Colliery, Newcastle. Seaham Colliery No. 1, Newcastle. Seaham Colliery No. 2, Newcastle. West Wallsend Colliery, Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to "The Medical Journal of Australia" alone, unless the contrary be stated.

All communications should be addressed to "The Editor," "The Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.

The following periodicals are required by the Librarian of the New South Wales Branch of the British Medical Association to complete the series for binding. Members who have borrowed these journals are requested to return them as soon as possible.

Lancet, November 7, 1914.
Lancet, November 14, 1914.